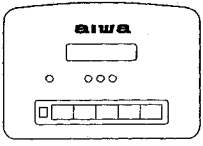
aiwa

aiwa SERVICE

HS-JX859
HS-JX859D
HS-JX959



STEREO RADIO CASSETTE RECORDER

SERVICE MANUAL

• BASIC TAPE MECHANISM: 4ZM-1 R3 • TYPE: AH,YHS

S/M Code No. 09-963-130-501

CAUTIONS WHEN SERVICING

When the main circuit board is opened during servicing, operation cannot be checked because the motor terminals, etc. are soldered directly to the board.

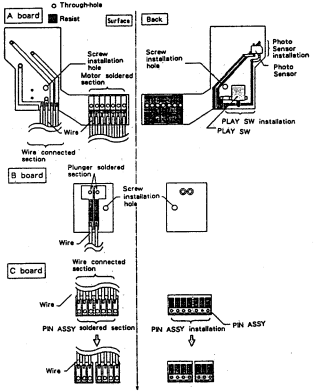
Use a jig (for the 4ZM-1) to check operation with the main circuit board open.

Part Description : 4ZM-1 JIG KIT, Part No. 09-001-323-010

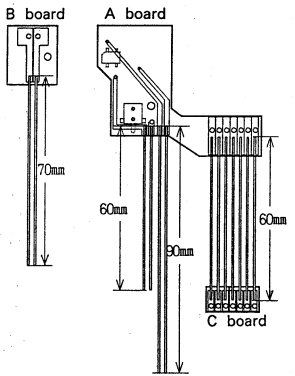
1. Assembling the Jig

Install the jig, referring to the following diagrams.

1) Divide the 6-pin flat cable to create three 2-pin wires.
2) Solder the C-SW PUSH and P-SNSR to the A board.
3) Solder the 7-pin flat cable and two 2-pin wires to the A board.
4) Solder the 2-pin wire to the B board.
5) Attach the PIN ASSY to the C board and solder it to the other end of the 7-pin flat cable which has been soldered to the A board.



Details of Jig and Assembly



Jig Complete View

2. Attaching the Jig

A board

- Fix the A board to the mechanism using the main board holding screws.
- Solder the motor terminals.
- Solder wires Ⓐ and Ⓑ to the PHOTO SENSOR.
- Solder wires Ⓒ and Ⓓ to the PLAY SW.

B board

- Fix the B board to the mechanism using the main board holding screws.
- Solder the plunger terminals.
- Solder wires Ⓔ and Ⓕ to plunger land on the MAIN board.

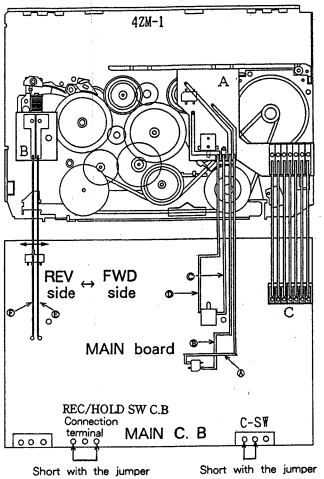
C board

- Solder the PIN ASSY on the C board to motor land on the MAIN board.

3. Using the Jig

When the circuit board is opened, the operation switches on the board are at the back. To increase working efficiency, use the remote control to operate the unit.

1) Connect the remote control to the unit.
2) Short the C-SW terminal.
3) Short the remote control SW terminal.
4) Switch the F/R SW to match the running of tape.



■ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	かいり NO.	DESCRIPTION
1	85-HJ2-905-010		IB,ESC(D)-B<8DAH>
2	85-HJ2-906-010		IB,ESC<8AH1,9AH1>
3	87-041-081-010		MIC,CM-S25A
4	87-042-175-019		AC-207 HJA<EXCEPT 8YHS>
5	87-047-151-010		PB-4S NAY(R)
6	87-B30-011-010		HEADPHONE,R53NA
7	82-HK3-951-010		CARRYING CASE
8	09-028-143-010		BATT.BOX ASSY

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

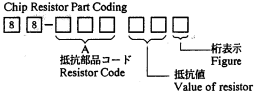
REF. NO	PART NO.	カンリNO.	DESCRIPTION
IC			
	87-001-894-080		IC,TA8155FN
	87-001-875-080		IC,BA1106FS
	87-020-234-080		IC,TA7688F(S)
	87-002-406-080		IC,TPIC326ADB
	87-002-691-080		IC,BA3714AF
	87-070-146-040		IC,TA2040FM<DAH>
	87-002-878-080		IC,NJU7002M
	87-A20-089-040		C-IC,PST9011
	87-001-931-080		IC,TA8152AFN<DAH>
	87-001-149-080		IC,TA8158F<AH,YHS>
	87-017-789-080		IC,TA2022FN
	87-017-791-080		IC,TD7103F
	87-002-545-080		IC,TA2018FN
	87-A20-087-010		C-IC,TC9317F-027
	87-A20-015-040		IC,AK93C55LV-EX
	87-017-826-080		IC,MM1085AFFE
	87-070-076-040		IC,PST9015
	87-001-808-010		IC,ASP5410 ●AH,YHS>
TRANSISTOR			
	89-508-804-080		C-FET,2SK880 Y
	87-026-595-080		C-TR,UMH10
	87-026-414-080		C-TR,RN1307
	87-026-596-080		C-TR,UMH9
	89-115-864-080		C-TR,2SA1586Y
	87-026-412-080		C-TR,RN1305
	89-113-625-080		C-TR,2SA1362GR
	87-026-429-080		C-TR,RN2311<AH,YHS>
	89-342-132-080		C-TR,2SC4213B
	87-026-521-080		C-TR,HN1C01F U(GR)
	87-026-585-080		C-TR,IMX1 HQQ
	87-026-481-080		C-TR,RN4607
	87-026-524-080		C-TR,HN1C03F U(B)
	87-026-346-080		C-TR,DTC114YU<DAH>
	89-342-153-080		C-TR,2SC4215O
	87-026-480-080		C-TR,RN4605
	87-026-327-080		C-TR,DTA144EU
	89-508-814-080		C-FET,2SK881 Y
	87-026-343-080		C-TR,DTC123JU
	89-341-165-080		C-TR,2SC4116GR
	87-026-423-080		C-TR,RN2305
	87-026-418-080		C-TR,RN1311
	87-026-470-080		C-TR,HN1C03F(B)
	89-112-134-080		C-TR,2SA1213Y
DIODE			
	87-017-779-080		C-DIODE,1SS355
	87-001-167-080		C-DIODE,1SS302
	87-001-166-080		C-DIODE,1SS301<DAH>
	87-017-366-080		C-DIODE,DAN 202U
MAIN C.B			
C1	87-016-314-080		C-CAP,S 1-16 F
C2	87-016-314-080		C-CAP,S 1-16 F
C3	87-012-195-080		C-CAP,U 100P-50 CH
C4	87-012-195-080		C-CAP,U 100P-50 CH
C5	87-012-274-080		C-CAP,U 1000P-50 B
C6	87-012-274-080		C-CAP,U 1000P-50 B
C7	87-012-271-080		C-CAP,U 560P-50 B
C8	87-012-271-080		C-CAP,U 560P-50 B
C9	87-016-114-080		C-CAP,U 0.01-25 BJ
C10	87-016-114-080		C-CAP,U 0.01-25 BJ
C11	87-016-296-080		C-CAP,TN 22-4 SV(A)
C12	87-016-296-080		C-CAP,TN 22-4 SV(A)
C13	87-010-787-080		C-CAP,U 0.022-25B
C14	87-010-787-080		C-CAP,U 0.022-25B
C15	87-016-314-080		C-CAP,S 1-16 F
C16	87-016-314-080		C-CAP,S 1-16 F
C17	87-010-788-080		C-CAP,U 0.033-25F
C18	87-010-788-080		C-CAP,U 0.033-25F
C19	87-012-282-080		C-CAP,U 4700P-50 B
C20	87-012-282-080		C-CAP,U 4700P-50 B
C21	87-012-286-080		C-CAP,U 0.01-25 B
C22	87-012-286-080		C-CAP,U 0.01-25 B
C23	87-010-788-080		C-CAP,U 0.033-25F
C24	87-010-788-080		C-CAP,U 0.033-25F
C25	87-010-831-080		C-CAP,U 0.1-16F
C26	87-010-831-080		C-CAP,U 0.1-16F
C27	87-010-831-080		C-CAP,U 0.1-16F
C29	87-012-286-080		C-CAP,U 0.01-25 B<DAH>
C30	87-012-271-080		C-CAP,U 560P-50 B
C31	87-016-314-080		C-CAP,S 1-16 F
C32	87-016-314-080		C-CAP,S 1-16 F
C35	87-012-275-080		C-CAP,U 1200P-50 B
C36	87-012-275-080		C-CAP,U 1200P-50 B
C37	87-012-141-080		C-CAP,S 0.22-16 F
C38	87-012-141-080		C-CAP,S 0.22-16 F
C39	87-016-431-080		C-CAP,E 220-4 5.5N
C40	87-016-431-080		C-CAP,E 220-4 5.5N
C41	87-016-431-080		C-CAP,E 220-4 5.5N
C42	87-012-286-080		C-CAP,U 0.01-25 B
C44	87-010-943-080		C-CAP,E 100-4
C45	87-016-296-080		C-CAP,TN 22-4 SV(A)
C46	87-016-296-080		C-CAP,TN 22-4 SV(A)
C47	87-010-758-080		C-CAP,U 0.068-25F
C48	87-010-831-080		C-CAP,U 0.1-16F
C49	87-010-942-080		C-CAP,E 47-4
C50	87-010-942-080		C-CAP,E 47-4
C51	87-016-296-080		C-CAP,TN 22-4 SV(A)
C52	87-010-831-080		C-CAP,U 0.1-16F
C53	87-010-831-080		C-CAP,U 0.1-16F
C54	87-010-831-080		C-CAP,U 0.1-16F
C55	87-012-141-080		C-CAP,S 0.22-16 F
C56	87-015-923-080		C-CAP,TN 0.22-35
C57	87-012-195-080		C-CAP,U 100P-50 CH<AH,YHS>
C57	87-018-129-080		C-CAP,U 680P-50 B<DAH>
C58	87-010-831-080		C-CAP,U 0.1-16F
C60	87-012-196-080		C-CAP,U 120P-50 CH<DAH>
C61	87-015-923-080		C-CAP,TN 0.22-35
C62	87-015-923-080		C-CAP,TN 0.22-35
C63	87-010-787-080		C-CAP,U 0.022-25B
C64	87-010-787-080		C-CAP,U 0.022-25B
C65	87-016-314-080		C-CAP,S 1-16 F
C66	87-016-314-080		C-CAP,S 1-16 F
C67	87-016-314-080		C-CAP,S 1-16 F
C68	87-016-314-080		C-CAP,S 1-16 F
C70	87-010-746-080		C-CAP,TN 10-4 A
C70	87-010-746-080		C-CAP,TN 10-4 A
C71	87-012-274-080		C-CAP,U 1000P-50 B
C72	87-012-270-080		C-CAP,U 470P-50 B
C73	87-012-270-080		C-CAP,U 470P-50 B
C74	87-010-182-080		C-CAP,S 2200P-50 B
C75	87-012-286-080		C-CAP,U 0.01-25 B
C76	87-010-197-080		C-CAP,S 0.01-25 B
C77	87-016-314-080		C-CAP,S 1-16 F
C78	87-010-424-080		C-CAP,TN 4.7-4
C79	87-012-279-080		C-CAP,U 2700P-50 B
C80	87-012-286-080		C-CAP,U 0.01-25 B
C81	87-012-286-080		C-CAP,U 0.01-25 B
C82	87-016-314-080		C-CAP,S 1-16 F
C83	87-010-522-080		C-CAP,TN 2.2-10<AH,YHS>
C83	87-016-286-080		C-CAP,TN 2.2-6.3 F93<DAH>
C84	87-016-296-080		C-CAP,TN 22-4 SV(A)<DAH>
C85	87-012-285-080		C-CAP,U 8200P-50 B<DAH>
C86	87-012-285-080		C-CAP,U 8200P-50 B<DAH>
C87	87-012-141-080		C-CAP,S 0.22-16 F<DAH>
C88	87-016-461-080		C-CAP,S 0.47-16 F<DAH>
C89	87-010-274-080		C-CAP,TN 3.3-4<DAH>
C90	87-016-669-080		C-CAP,S 0.1-25 K B<DAH>
C91	87-012-141-080		C-CAP,S 0.22-16 F<DAH>
C92	87-010-787-080		C-CAP,U 0.022-25B<DAH>
C93	87-016-296-080		C-CAP,TN 22-4 SV(A)<DAH>
C94	87-012-166-080		C-CAP,U 4P-50 CH<DAH>
C95	87-010-786-080		C-CAP,U 0.018-25 BK<DAH>
C96	87-010-786-080		C-CAP,U 0.018-25 BK<DAH>
C97	87-012-286-080		C-CAP,U 0.01-25 B<DAH>
C98	87-016-436-080		C-CAP,TN 47-4(B2)<DAH>
C99	87-016-669-080		C-CAP,S 0.1-25 K B<DAH>
C101	87-010-197-080		C-CAP,S 0.01-25 B
C102	87-016-461-080		C-CAP,S 0.47-16 F
C103	87-010-196-080		C-CAP,S 0.1-25 F
C104	87-016-461-080		C-CAP,S 0.47-16 F
C105	87-010-194-080		C-CAP,S 0.047-25 F
C106	87-010-504-080		C-CAP,TN 0.47-25
C107	87-015-923-080		C-CAP,TN 0.22-35
C108	87-010-196-080		C-CAP,S 0.1-25 F
C109	87-010-194-080		C-CAP,S 0.047-25 F
C116	87-016-436-080		C-CAP,TN 47-4(B2)<DAH>
C130	87-016-286-080		C-CAP,TN 2.2-6.3 F93
C131	87-016-291-080		C-CAP,TN33-6.3 F93
C132	87-016-504-080		C-CAP,TN 6.8-4 (A2)<DAH>
C150	87-016-314-080		C-CAP,S 1-16 F
C151	87-016-314-080		C-CAP,S 1-16 F
C152	87-016-314-080		C-CAP,S 1-16 F
C153	87-016-314-080		C-CAP,S 1-16 F
C154	87-010-787-080		C-CAP,U 0.022-25B
C155	87-010-787-080		C-CAP,U 0.022-25B
C156	87-010-758-080		C-CAP,U 0.068-25F
C157	87-010-758-080		C-CAP,U 0.068-25F
C158	87-010-758-080		C-CAP,U 0.068-25F
C159	87-010-758-080		C-CAP,U 0.068-25F
C160	87-016-314-080		C-CAP,S 1-16 F
C161	87-016-314-080		C-CAP,S 1-16 F
C162	87-010-831-080		C-CAP,U 0.1-16F
C163	87-010-831-080		C-CAP,U 0.1-16F
C164	87-012-284-080		C-CAP,U 6800P-50 B
C165	87-012-284-080		C-CAP,U 6800P-50 B
C166	87-016-436-080		C-CAP,TN 47-4(B2)<AH,YHS>
C167	87-016-314-080		C-CAP,S 1-16 F
C168	87-016-314-080		C-CAP,S 1-16 F
C169	87-010-943-080		C-CAP,E 100-4
C170	87-012-270-080		C-CAP,U 470P-50 B
C171	87-012-270-080		C-CAP,U 470P-50 B
C172	87-010-831-080		C-CAP,U 0.1-16F
C301	87-016-314-080		C-CAP,S 1-16 F<AH,YHS>
C302	87-016-314-080		C-CAP,S 1-16 F<AH,YHS>
C303	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C304	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C305	87-012-286-080		C-CAP,U 0.01-25 B<AH,YHS>
C306	87-012-286-080		C-CAP,U 0.01-25 B<AH,YHS>
C307	87-012-191-080		C-CAP,U 68P-50 CH<AH,YHS>
C308	87-012-191-080		C-CAP,U 68P-50 CH<AH,YHS>
C309	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C310	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C311	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C312	87-010-829-080		C-CAP,U 0.047-16F<AH,YHS>
C313	87-015-934-080		C-CAP,TN 2.2-4<AH,YHS>
C314	87-016-286-080		C-CAP,TN 2.2-6.3 F93<AH,YHS>
C315	87-010-424-080		C-CAP,TN 4.7-4<AH,YHS>
C316	87-010-424-080		C-CAP,TN 4.7-4<AH,YHS>
C317	87-012-142-080		C-CAP,S 0.33-16 F<AH,YHS>
C318	87-012-142-080		C-CAP,S 0.33-16 F<AH,YHS>
C319	87-012-266-080		C-CAP,U 220P-50 B<AH,YHS>
C320	87-012-266-080		C-CAP,U 220P-50 B<AH,YHS>
C321	87-010-424-080		C-CAP,TN 4.7-4<AH,YHS>
C322	87-010-746-080		C-CAP,TN 10-4 A<AH,YHS>
C323	87-016-314-080		C-CAP,S 1-16 F<AH,YHS>
C335	87-016-504-080		C-CAP,TN 6.8-4 (A2)<AH,YHS>
J1	87-099-676-010		JACK,3.5 ST BLK P/M
J2	87-099-577-010		JACK,DC 3.75
L1	87-003-240-080		C-COIL,S 3.3 UH
L2	87-003-240-080		C-COIL,S 3.3 UH
L3	87-003-240-080		C-COIL,S 3.3 UH
L4	87-003-240-080		C-COIL,S 3.3 UH
L5	87-003-240-080		C-COIL,S 3.3 UH
L6	84-HJ9-616-110		COIL,LOADING 3.3
L7	87-007-270-080		C-COIL,OSC BIAS
L8	87-003-243-080		C-COIL,S 10UH K<DAH>
PS1	87-017-793-080		P-SNSR,GP2L27
R3	87-022-280-080		C-RES,U 560-1/16W F
R4	87-022-215-080		C-RES,U 1K-1/16W F
R5	87-022-280-080		C-RES,U 560-1/16W F
R6	87-022-215-080		C-RES,U 1K-1/16W F
R9	87-022-243-080		C-RES,U 15K-1/16W F
R10	87-022-243-080		C-RES,U 15K-1/16W F
R11	87-022-292-080		C-RES,U 330K-1/16W F
R12	87-022-292-080		C-RES,U 330K-1/16W F
R116	87-022-037-080		C-RES, M M/F 0.6B
R134	87-022-288-080		C-RES,U 150K-1/16WF
R135	87-022-286-080		C-RES,U 100K-1/16W F
R136	87-022-294-080		C-RES,U 470K-1/16WF
R137	87-022-251-080		C-RES,U 33K-1/16W F
R138	87-022-251-080		C-RES,U 33K-1/16W F
R140	87-022-294-080		C-RES,U 470K-1/16WF
SFR1	87-A90-104-080		C-SFR,6.8K H CVR-32<AH,YHS>
SFR1	87-024-689-080		C-SFR,6.8K TMC3K<DAH>
SFR2	87-A90-105-080		C-SFR,1.5K H CVR-32<AH,YHS>
SFR2	87-024-591-080		C-SFR,1K TMC3K<DAH>
SW1	87-036-244-080		C-SW,SLIDE 1-2-2(NC)
SW2	87-036-123-080		C-SW,SLIDE 1-1-2<DAH>
SW3	87-036-146-080		C-SW SLIDE 1-1-4
SW4	87-036-237-080		C-SW,PUSH
SW5	80-ZM4-605-010		SW,LEAF REC
SW6	87-036-123-080		C-SW,SLIDE 1-1-2
SW7	87-036-236-080		C-SW,SLIDE 1-1-2(NC)
SW8	87-036-123-080		C-SW,SLIDE 1-1-2
SW9	84-HK3-604-110		SW,LEAF 4ZM-1P
SW10	84-HJ2-620-110		SW,LEAF 4ZM-1 J(EH)
SW11	87-036-123-080		C-SW,SLIDE 1-1-2
SW12	87-036-123-080		C-SW,SLIDE 1-1-2<DAH>
SW15	87-036-123-080		C-SW,SLIDE 1-1-2<AH,YHS>
SW301	87-036-145-080		C-SW,SLIDE 1-1-3<AH,YHS>
SW331	87-036-123-080		C-SW,SLIDE 1-1-2<AH,YHS>
TM1	84-HK3-960-010		TERM,ASSY PB-4S
VR1	87-099-677-080		C-VR,20KAX2 DIA14
X1	87-030-325-080		C-VIB,FBRC3.6A-CDI<DAH>
TUNER C.B			
C201	87-010-322-080		C-CAP,S 100P-50 CH
C202	87-012-274-080		C-CAP,U 1000P-50 B<AH,YHS>
C202	87-012-271-080		C-CAP,U 560P-50 B<DAH>
C203	87-010-318-080		C-CAP,S 47P-50 CH<AH,YHS>
C203	87-012-275-080		C-CAP,U 1200P-50 B<DAH>
C204	87-010-152-080		C-CAP,S 8P-50 CH<DAH>
C204	87-012-172-080		C-CAP,U 10P-50 CH<AH,YHS>
C205	87-010-175-080		C-CAP,S 560P-50 SL<DAH>
C205	87-012-168-080		C-CAP,U 6P-50 CH<AH,YHS>
C206	87-010-316-080		C-CAP,S 33P-50 CH<DAH>
C206	87-012-286-080		C-CAP,U 0.01-25 B<AH,YHS>
C207	87-010-312-080		C-CAP,S 15P-50 CH<AH,YHS>
C207	87-012-157-080		C-CAP,S 330P-50 CH<DAH>
C208	87-016-057-080		C-CAP,TN 47-4 F95
C209	87-010-316-080		C-CAP,S 33P-50 CH<AH,YHS>
C209	87-012-286-080		C-CAP,U 0.01-25 B<DAH>
C210	87-010-316-080		C-CAP,S 33P-50 CH<DAH>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C210	87-012-274-080		C-CAP,U 1000P-50 B<AH,YHS>
C211	87-010-198-080		C-CAP,S 0.022-25 B<AH,YHS>
C211	87-012-163-080		C-CAP,U 1.5P-50 CK<DAH>
C212	87-012-140-080		C-CAP,S 470P-50 CH<DAH>
C213	87-012-164-080		C-CAP,U 2P-50 CK<DAH>
C213	87-012-165-080		C-CAP,U 3P-50 CJ<AH,YHS>
C214	87-012-193-080		C-CAP,U 82P-50 CH
C215	87-012-286-080		C-CAP,U 0.01-25 B
C216	87-010-746-080		C-CAP,TN 10-4 A
C217	87-010-787-080		C-CAP,U 0.022-25B
C218	87-012-282-080		C-CAP,U 4700P-50 B
C219	87-012-172-080		C-CAP,U 10P-50 CH
C220	87-012-140-080		C-CAP,S 470P-50 CH
C221	87-012-193-080		C-CAP,U 82P-50 CH
C222	87-012-250-080		C-CAP,U 24P-50 UJ<AH,YHS>
C222	87-012-251-080		C-CAP,U 27P-50 UJ<DAH>
C223	87-012-286-080		C-CAP,U 0.01-25 B
C224	87-012-273-080		C-CAP,U 820P-50 B
C225	87-010-805-080		C-CAP,S 1-16 F
C226	87-010-746-080		C-CAP,TN 10-4 A
C227	87-012-274-080		C-CAP,U 1000P-50 B
C228	87-012-282-080		C-CAP,U 4700P-50 B
C229	87-010-831-080		C-CAP,U 0.1-16F
C230	87-012-167-080		C-CAP,U 5P-50 CH
C231	87-010-746-080		C-CAP,TN 10-4 A
C232	87-010-829-080		C-CAP,U 0.047-16F
C233	87-012-270-080		C-CAP,U 470P-50 B
C234	87-012-286-080		C-CAP,U 0.01-25 B
C235	87-012-274-080		C-CAP,U 1000P-50 B
C236	87-012-141-080		C-CAP,S 0.22-16 F
C237	87-010-787-080		C-CAP,U 0.022-25B
C238	87-010-805-080		C-CAP,S 1-16 F
C239	87-012-349-080		C-CAP,S 1000P-50 CH
C240	87-010-831-080		C-CAP,U 0.1-16F
C241	87-010-829-080		C-CAP,U 0.047-16F
C242	87-012-274-080		C-CAP,U 1000P-50 B
C243	87-012-284-080		C-CAP,U 6800P-50 B
C244	87-012-284-080		C-CAP,U 6800P-50 B
C245	87-010-805-080		C-CAP,S 1-16 F
C246	87-010-805-080		C-CAP,S 1-16 F
C247	87-010-505-080		C-CAP,TN 1-16
C248	87-010-787-080		C-CAP,U 0.022-25B
C249	87-012-286-080		C-CAP,U 0.01-25 B
C250	87-012-286-080		C-CAP,U 0.01-25 B<DAH>
C251	87-012-286-080		C-CAP,U 0.01-25 B
C252	87-012-195-080		C-CAP,U 100P-50 CH
C253	87-012-286-080		C-CAP,U 0.01-25 B
C254	87-010-805-080		C-CAP,S 1-16 F
C255	87-010-805-080		C-CAP,S 1-16 F
C256	87-012-199-080		C-CAP,U 220P-50 CH
C257	87-012-172-080		C-CAP,U 10P-50 CH
C258	87-012-182-080		C-CAP,U 27P-50 CH
C259	87-016-296-080		C-CAP,TN 22-4 SV(A)
C260	87-010-831-080		C-CAP,U 0.1-16F
C261	87-012-176-080		C-CAP,U 15P-50 CH
C262	87-012-169-080		C-CAP,U 7P-50 CH
C263	87-010-831-080		C-CAP,U 0.1-16F
C264	87-010-831-080		C-CAP,U 0.1-16F
C265	87-010-831-080		C-CAP,U 0.1-16F
C266	87-010-831-080		C-CAP,U 0.1-16F
C267	87-010-186-080		C-CAP,S 4700P-50 B<DAH>
C268	87-012-286-080		C-CAP,U 0.01-25 B<DAH>
C269	87-012-286-080		C-CAP,U 0.01-25 B
C270	87-010-505-080		C-CAP,TN 1-16
C271	87-016-296-080		C-CAP,TN 22-4 SV(A)
C272	87-010-831-080		C-CAP,U 0.1-16F<DAH>
C273	87-012-282-080		C-CAP,U 4700P-50 B<DAH>
C275	87-012-195-080		C-CAP,U 100P-50 CH<AH,YHS>
CF201	87-008-539-080		C-FLTR KIT,10.7Y-AE
CF202	87-008-539-080		C-FLTR KIT,10.7Y-AE

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
CF203	87-008-540-080		C-FLTR,450K(ECFM2)
D201	87-001-708-080		C-VARACTOR,1SV228
D202	87-001-708-080		C-VARACTOR,1SV228
D203	87-001-708-080		C-VARACTOR,1SV228<DAH>
D204	87-001-708-080		C-VARACTOR,1SV228<DAH>
D205	87-026-435-080		C-VARICAP,KV1560
D207	87-070-078-080		C-LED,SML-010 MT
D208	87-070-077-080		C-LED,SML-010 DT
D209	87-070-079-080		C-LED,SML-010 VT
F201	87-008-406-080		BPF,GPMB1<AH,YHS>
F201	87-008-555-080		C-FLTR,GTSV05<DAH>
L201	85-HR4-626-080		COIL,FM RF<AH,YHS>
L201	85-HR4-606-080		COIL,TV RF<DAH>
L202	85-HR4-625-080		COIL,FM OSC<AH,YHS>
L202	85-HR3-607-080		COIL,FM RF<DAH>
L203	85-HR4-608-080		COIL,TV OSC<DAH>
L204	85-HR4-607-080		COIL,FM OSC<DAH>
L205	87-005-564-080		C-COIL,S 2.2UH K
L206	87-003-247-080		C-COIL,100UH J<AH,YHS>
L206	87-003-226-010		COIL,100UH<DAH>
L207	87-008-420-080		C-IFT,450K,MW
L208	85-HR3-612-080		C-COIL,DD
L209	85-HR4-616-010		BAR-ANT MW
LCD201	85-HJ2-619-010		LCD(ZEBRA) EX<AH,YHS>
LCD201	85-HJ2-615-010		LCD,(ZEBRA)<DAH>
SW201	87-036-342-080		C-SW,TACT V
SW202	87-036-342-080		C-SW,TACT V
SW203	87-036-342-080		C-SW,TACT V
VC201	87-011-192-080		C-TRIMER,CTZ30C
VC202	87-011-189-080		C-TRIMER,CTZ-10A
VR201	87-A90-027-080		C-SFR,22K H CVR-32<AH,YHS>
VR201	87-024-596-080		C-SFR,22K YMC 3K<DAH>
X201	87-008-539-080		C-FLTR KIT,10.7Y-AE
X202	87-030-180-010		X'TAL KF-38R5-8A
			REC/HOLD SW C.B
SW13	87-036-123-080		C-SW,SLIDE 1-1-2<DAH>
SW13	87-036-383-080		C-SW,SLIDE 1-1-2(NC)E<AH,YHS>
SW14	87-036-373-080		C-SW,SLIDE 1-1-2(E)<AH,YHS>
SW14	87-036-236-080		C-SW,SLIDE 1-1-2(NC)<DAH>
			REGULATOR C.B
C401	84-439-620-010		CAP,E 470-4
			TACT FLEX.C.B
	85-HJ2-614-010		PWB,FLEX TACT 6KEY
			SENSOR FLEX.C.B
			HEAD FLEX.C.B
			TUNER FLEX.C.B
	85-HJ2-613-010		PWB,FLEX TU 37P

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

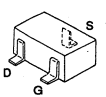
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



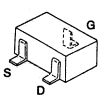
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法(mm)/Dimensions 外形/Form	L	W	t	抵抗コード :A Resistor Code: A
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

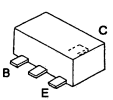
TRANSISTOR ILLUSTRATION



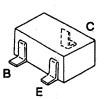
2SK881



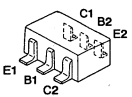
2SK880



2SA1213

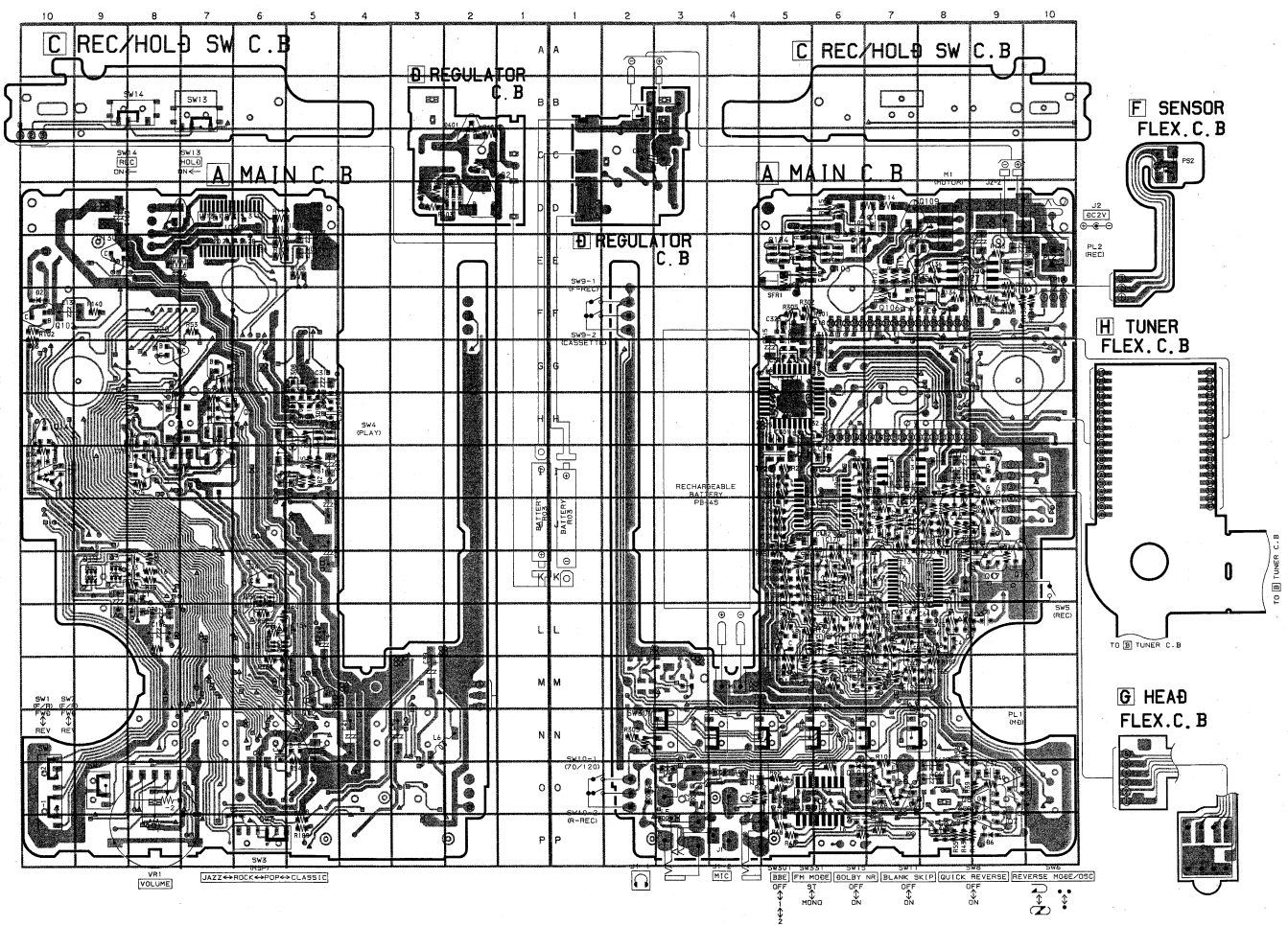


2SA1362
2SA1586
2SC4116
2SC4213
2SC4215
DTA144EU
DTC114YU
DTC123JU
RN1305
RN1307
RN1311
RN2305
RN2311



HN1C01
HN1C03
IMX1
RN4605
RN4607
UMH9
UMH10

WIRING – 1 〈HS-JX859AH, YHS/JX959AH〉 (MAIN SECTION)



SPECIFICATIONS

HS-JX859/959

Frequency range
Reception area " *E* "
AM 531-1,602 kHz (9 kHz steps)
FM 87.5-108 MHz (50 kHz steps)
Reception area " *U* "
AM 530-1,710 kHz (10 kHz steps)
FM 87.5-108.1 MHz (200 kHz steps)

Maximum output 12 mW + 12 mW (EIAJ/16 Ω)

Power source
Rechargeable battery, DC 2V using PB-4S
Dry cell batteries (2), DC 3V R03 (size AAA)
Domestic AC power (using the supplied AC adaptor)

Battery life
Rechargeable battery (PB-4S)
Approx. 2.5 hours (EIAJ, PB 1 mW/10 minutes recharging)
Approx. 6.5 hours (EIAJ, PB 1 mW/2 hour recharging)
Approx. 4 hours (EIAJ, REC 1 mW/2 hour recharging)

Dimensions 109.7 (W) × 80.3 (H) × 26.1 (D) mm (4 3/8 × 3 1/4 × 1 1/16 in)

Weight Approx. 221 g (0.49 lb) including rechargeable battery

<AC adaptor AC-207>

Rated voltage AC-207H: AC 115V/230V, switchable

Rated output DC 2V 350 mA

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
- Under license from BBE Sound, Inc.

HS-JX859D

Frequency range
Reception area " *E* "
AM 531-1,602 kHz (9 kHz steps)
FM 87.5-108 MHz (50 kHz steps)
Reception area " *U* "
AM 530-1,710 kHz (10 kHz steps)
FM 87.5-108.1 MHz (200 kHz steps)
Reception area " *J* "
AM 531-1,629 kHz (9 kHz steps)
FM 76.0-90.0 MHz (100 kHz steps)
TV 1-12ch

Maximum output 12 mW + 12 mW (EIAJ/16 Ω)

Power source
Rechargeable battery, DC 2V using PB-4S
Dry cell batteries (2), DC 3V R03 (size AAA)
Domestic AC power (using the supplied AC adaptor)

Battery life
Rechargeable battery (PB-4S)
Approx. 2.5 hours (EIAJ, PB 1 mW/10 minutes recharging)
Approx. 6.5 hours (EIAJ, PB 1 mW/2 hour recharging)
Approx. 4 hours (EIAJ, REC 1 mW/2 hour recharging)

Dimensions 109.7 (W) × 80.3 (H) × 26.1 (D) mm (4 3/8 × 3 1/4 × 1 1/16 in)

Weight Approx. 221 g (0.49 lb) including rechargeable battery

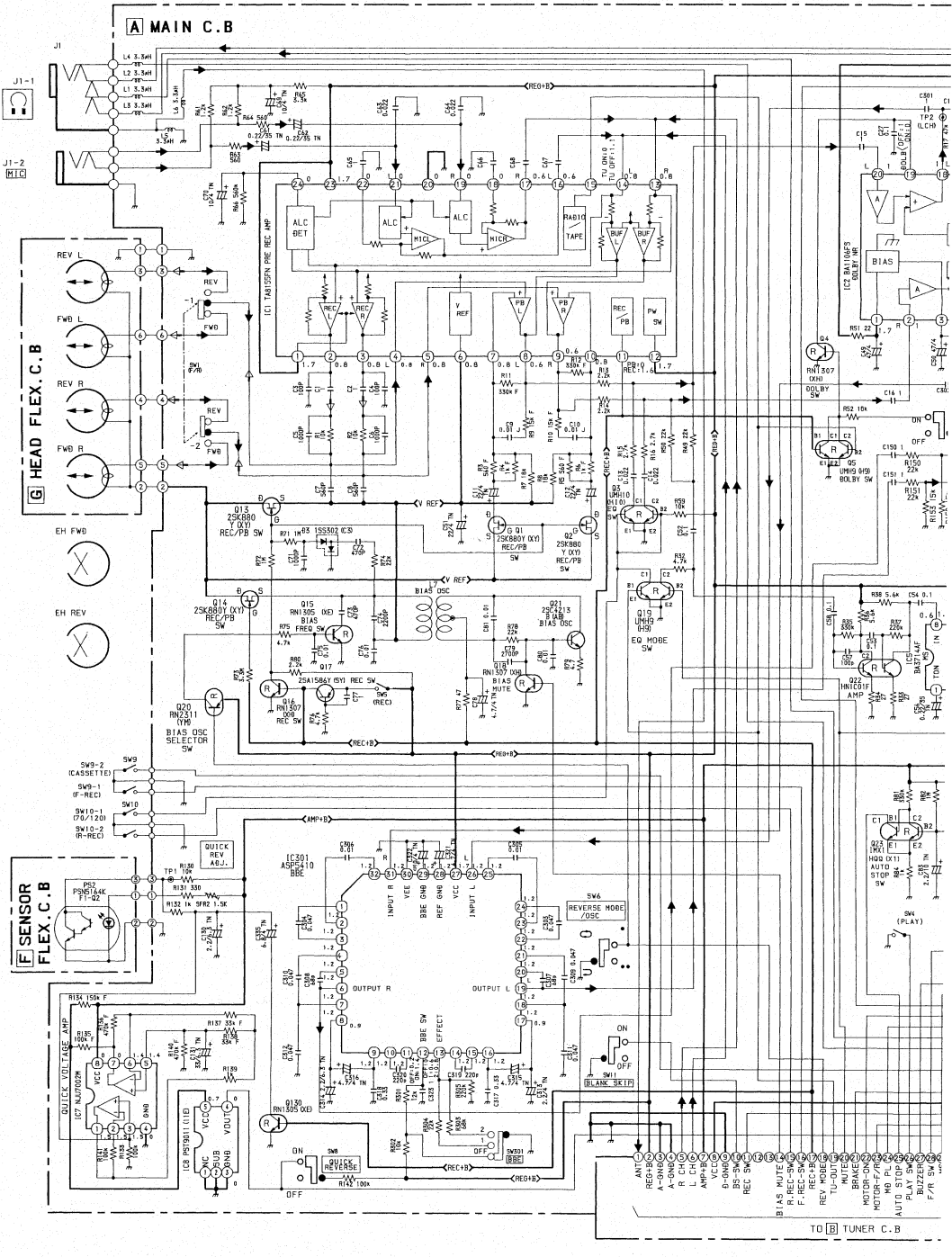
<AC adaptor AC-207H>

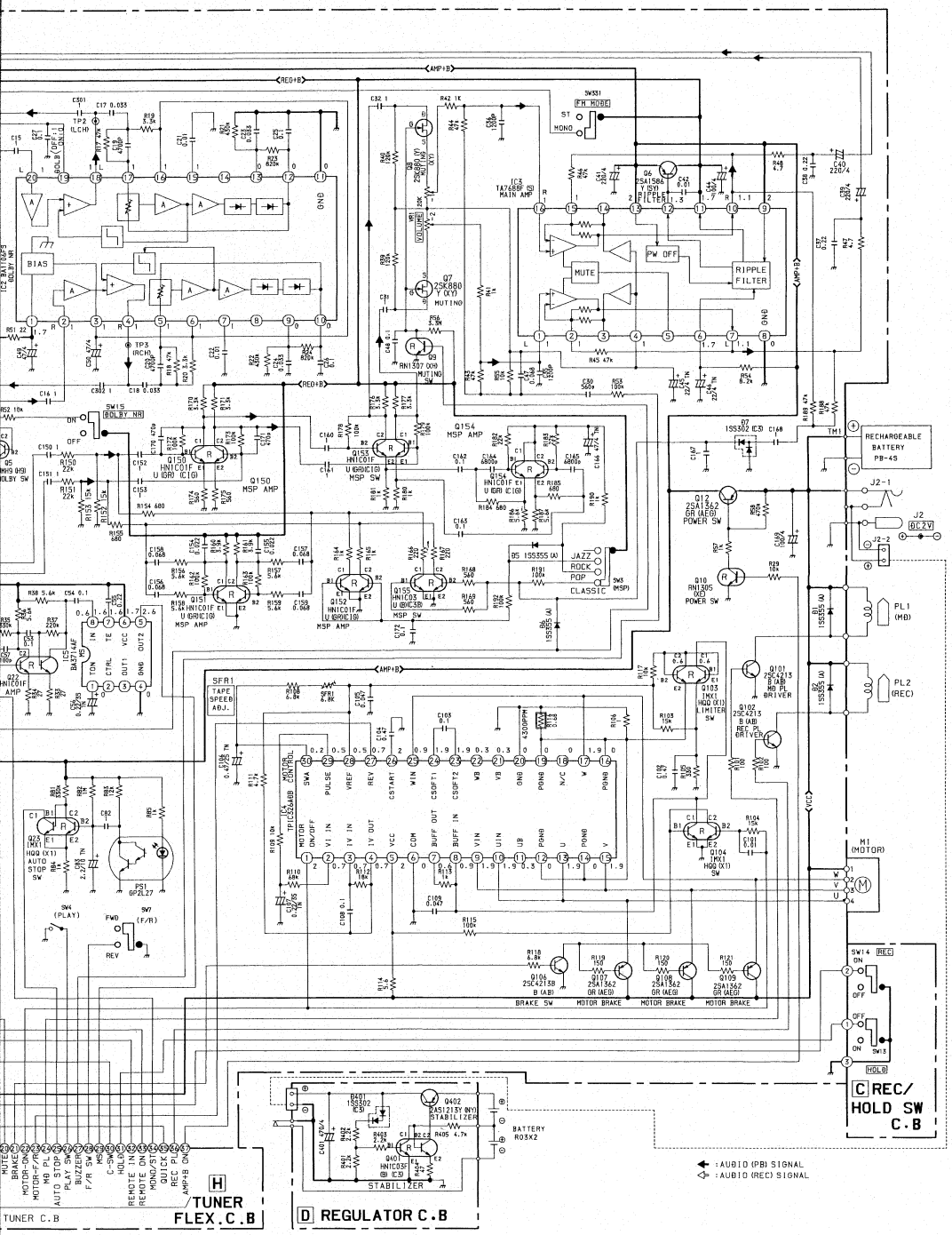
Rated voltage AC 115V/230V, switchable

Rated output DC 2V 350 mA

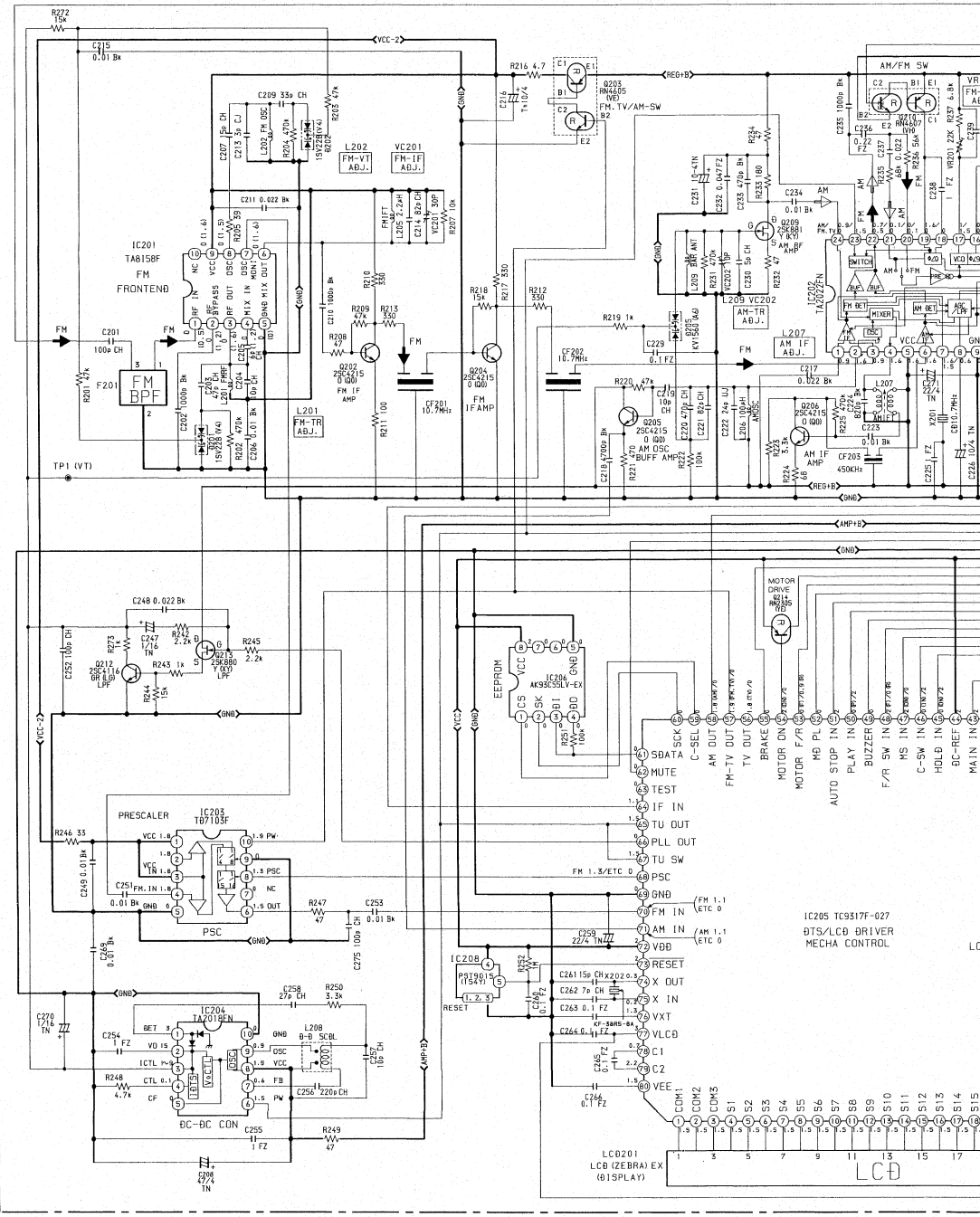
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

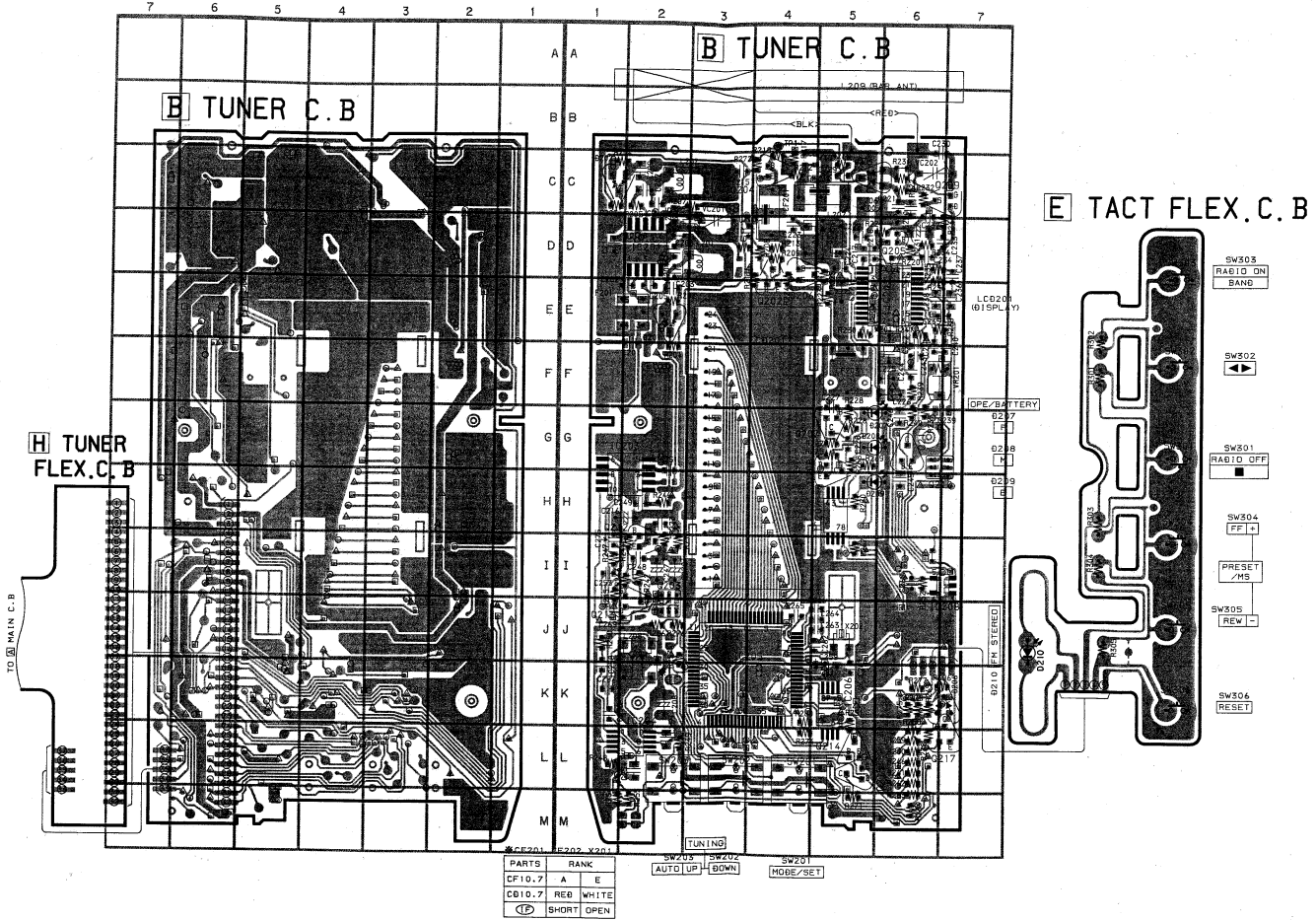
SCHEMATIC DIAGRAM – 1 〈HS-JX859AH, YHS/JX959AH〉 (MAIN SECTION)

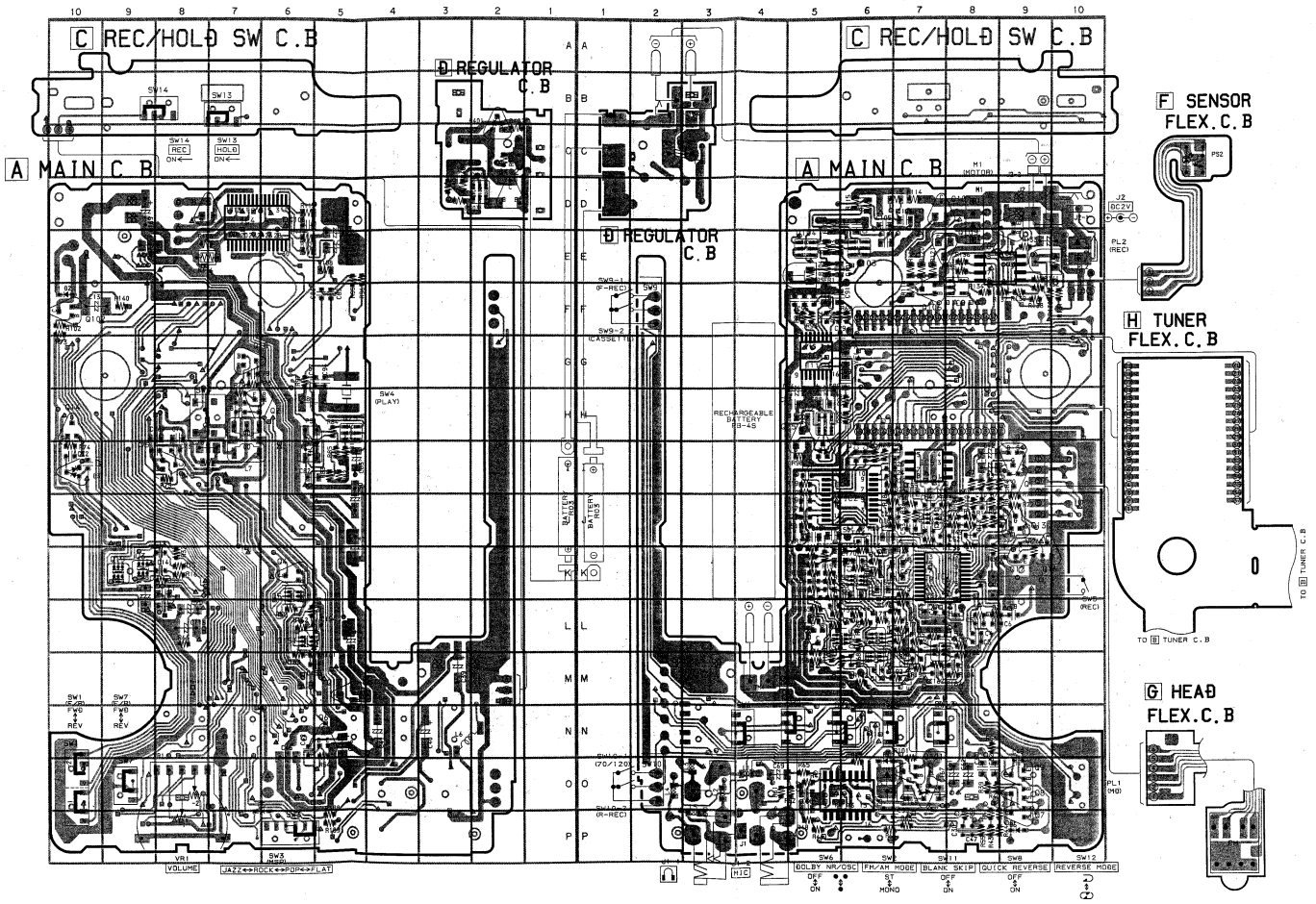



TUNER C.B
H
TUNER
FLEX.C.B
D REGULATOR C.B
C REC/
HOLD SW
C.B
RECHARGEABLE
BATTERY
PB-45
BATTERY
R03X2
: AUDIO (PB) SIGNAL
: AUDIO (REC) SIGNAL

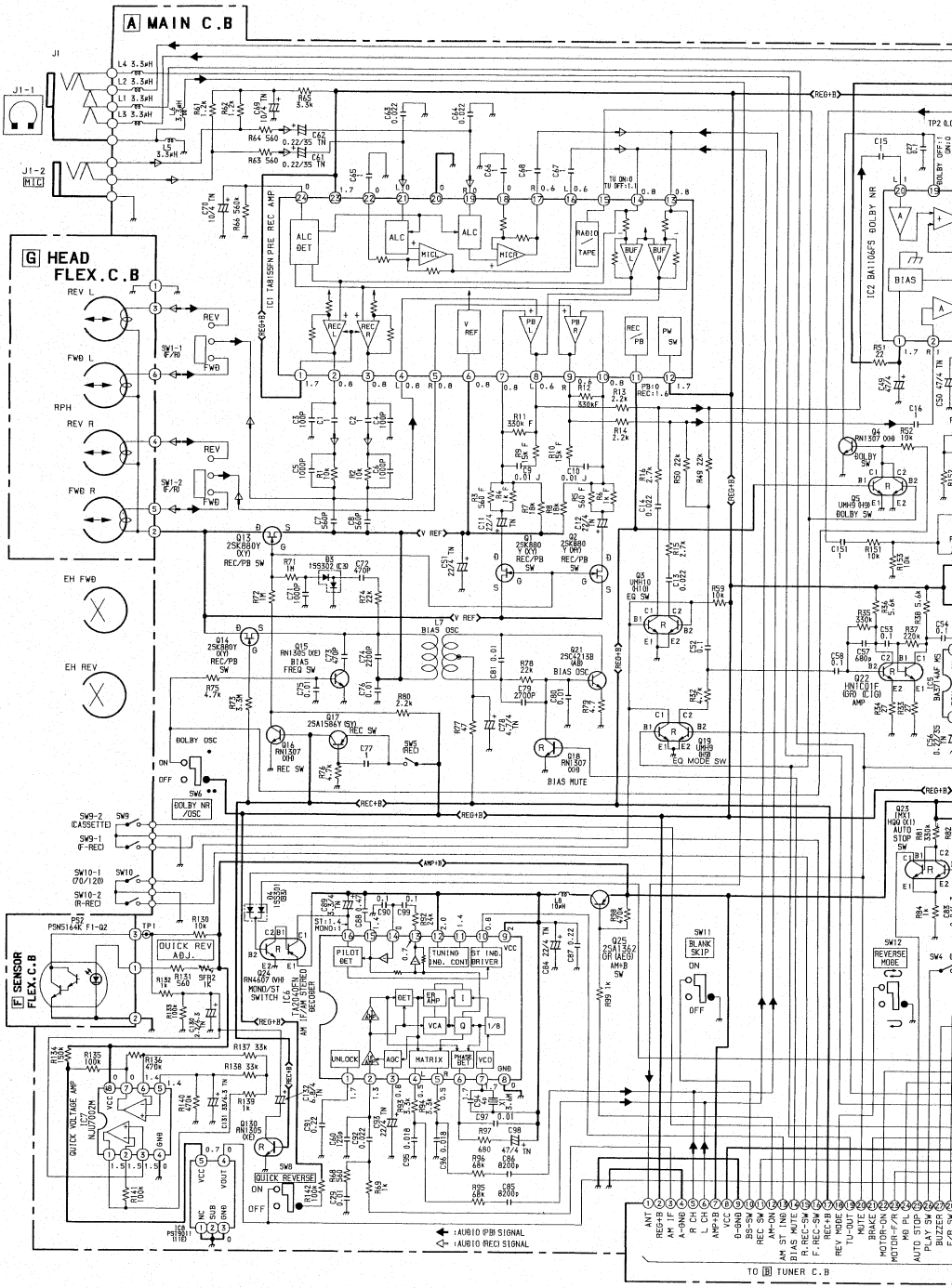
B TUNER C.B

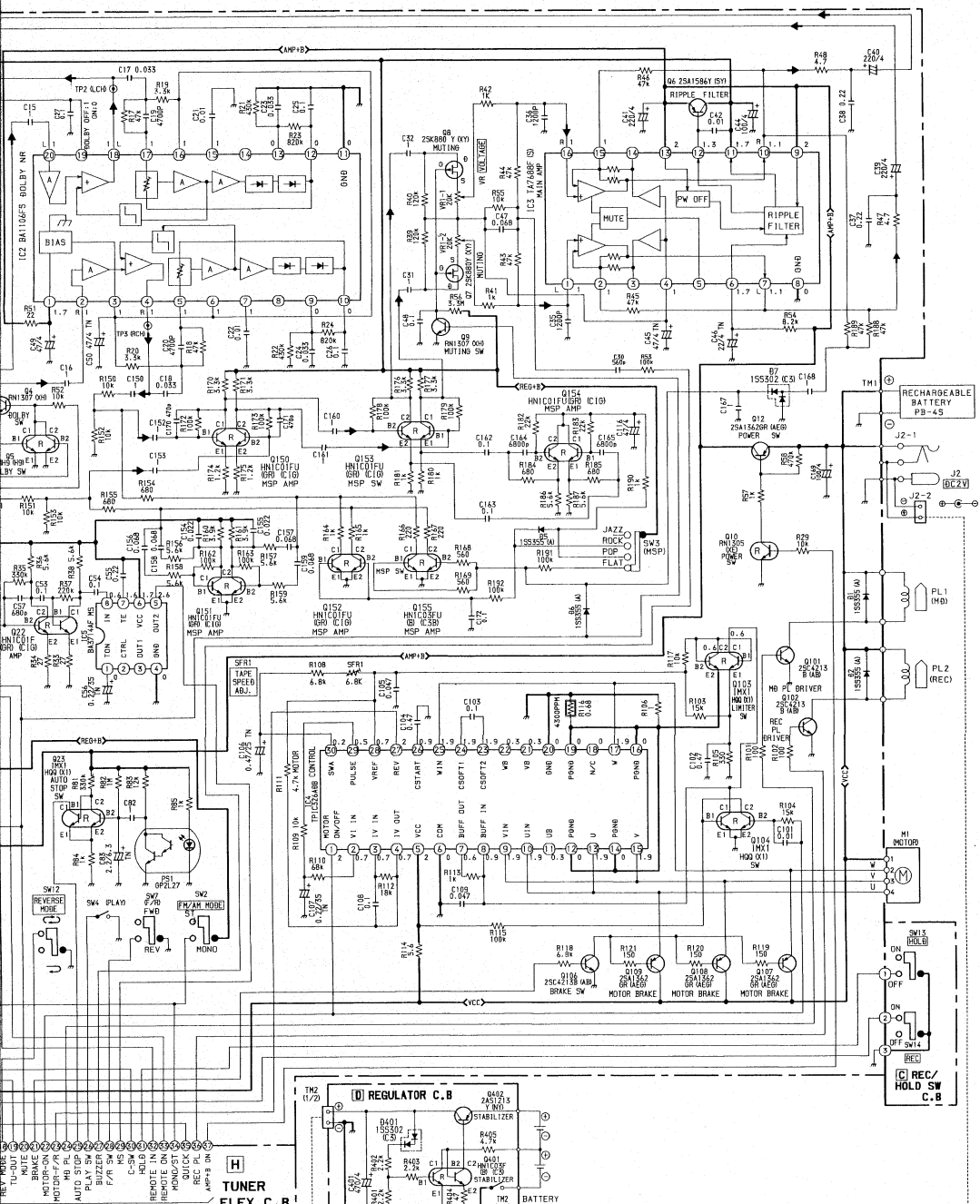

IC201 TA8158F FM FRONTEND
FM BPF
F201
L201 FM-TR ADJ.
L202 FM-VT ADJ.
VC201 FM-IF ADJ.
L209 VC202 AM-TR ADJ.
L207 AM IF ADJ.
Q203 RN4605 (WD) FM.TV/AM-SW
Q204 2SC4215 O (QD) FM IFAMP
Q205 2SC4215 O (QD) AM OSC BUFF AMP
Q206 2SC4215 O (QD) AM IF AMP
Q209 2SC4081 Y (KT) AM RF AMP
IC202 TA2022FN
IC203 TB7103F PRESCALER
IC204 TA2018FN
IC205 TC9317F-027 BTS/LCD DRIVER MECHA CONTROL
IC206 AK93C55LV-EX EEPROM
IC208 PST9015 (1527)
Q212 2SC2116 GR (LD) LPF
Q213 2SK880 Y (QY) LPF
CF201 10.7MHz
CF202 10.7MHz
CF203 450KHz
X201 CB10.7MHz
X202 CF-388S-BA
LCD201 LCD (ZEBRA) EX (DISPLAY)
LCD
VCC-2
REG+B
AMP+B
GND
FM
AM
TP1 (VT)
SCK
C-SEL
AM OUT
FM-TV OUT
TV OUT
BRAKE
MOTOR ON
MOTOR F/R
MD PL
AUTO STOP IN
PLAY IN
BUZZER
F/R SW IN
MS IN
C-SW IN
HOLD IN
DC-REF
MAIN IN
SDATA
MUTE
TEST
IF IN
TU OUT
PLL OUT
TU SW
PSC
GND
FM IN
AM IN
VDD
RESET
X OUT
X IN
VXT
VLCD
C1
C2
VEE
COM1
COM2
COM3
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
DC-DC CON


B TUNER C.B
B TUNER C.B
E TACT FLEX.C.B
H TUNER FLEX.C.B
TO H MAIN C.B
L209 (BAR ANT)
<RED>
<BLK>
LCD201 (DISPLAY)
OPE/BATTERY
D227
D228
D229
D210 FM STEREO
D220
SW303 RADIO ON BAND
SW302
SW301 RADIO OFF
SW304 FF +
PRESET /MS
SW305 REW -
SW306 RESET
TUNING
SW203 AUTO UP
SW202 DOWN
SW201 MODE/SET
CF201 F202 X201
PARTS RANK
CF10.7 A E
C010.7 RE0 WHITE
(F) SHORT OPEN

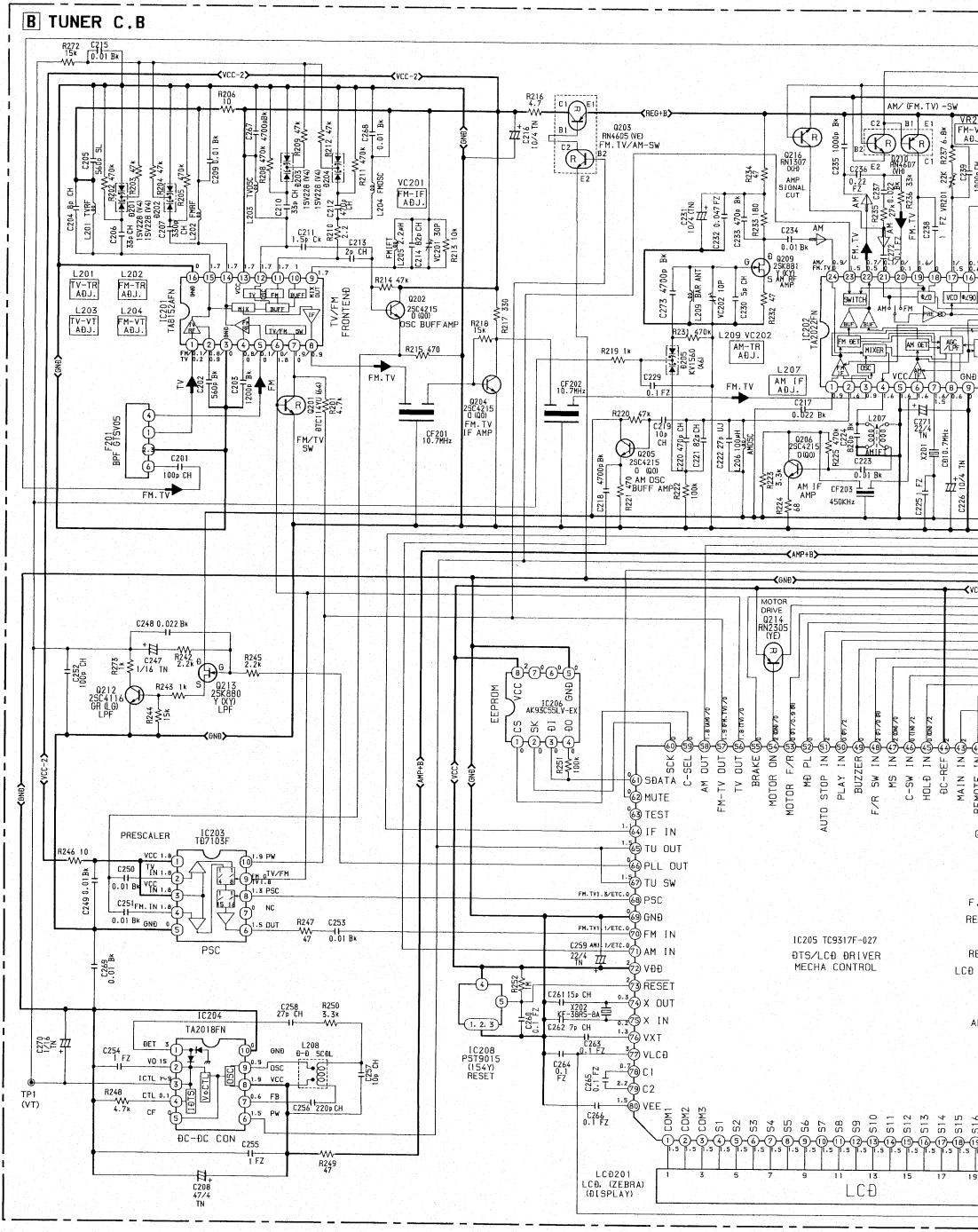

C REC/HOLD SW C.B
D REGULATOR C.B
A MAIN C.B
C REC/HOLD SW C.B
D REGULATOR C.B
A MAIN C.B
F SENSOR FLEX.C.B
H TUNER FLEX.C.B
G HEAD FLEX.C.B
TO B TUNER C.B
VOLUME
JAZZ↔ROCK↔POP↔FLAT
BOLBY NR/OSC
FM/AM MODE
BLANC SKIP
QUICK REVERSE
REVERSE MODE
RECHARGEABLE BATTERY BB-4S

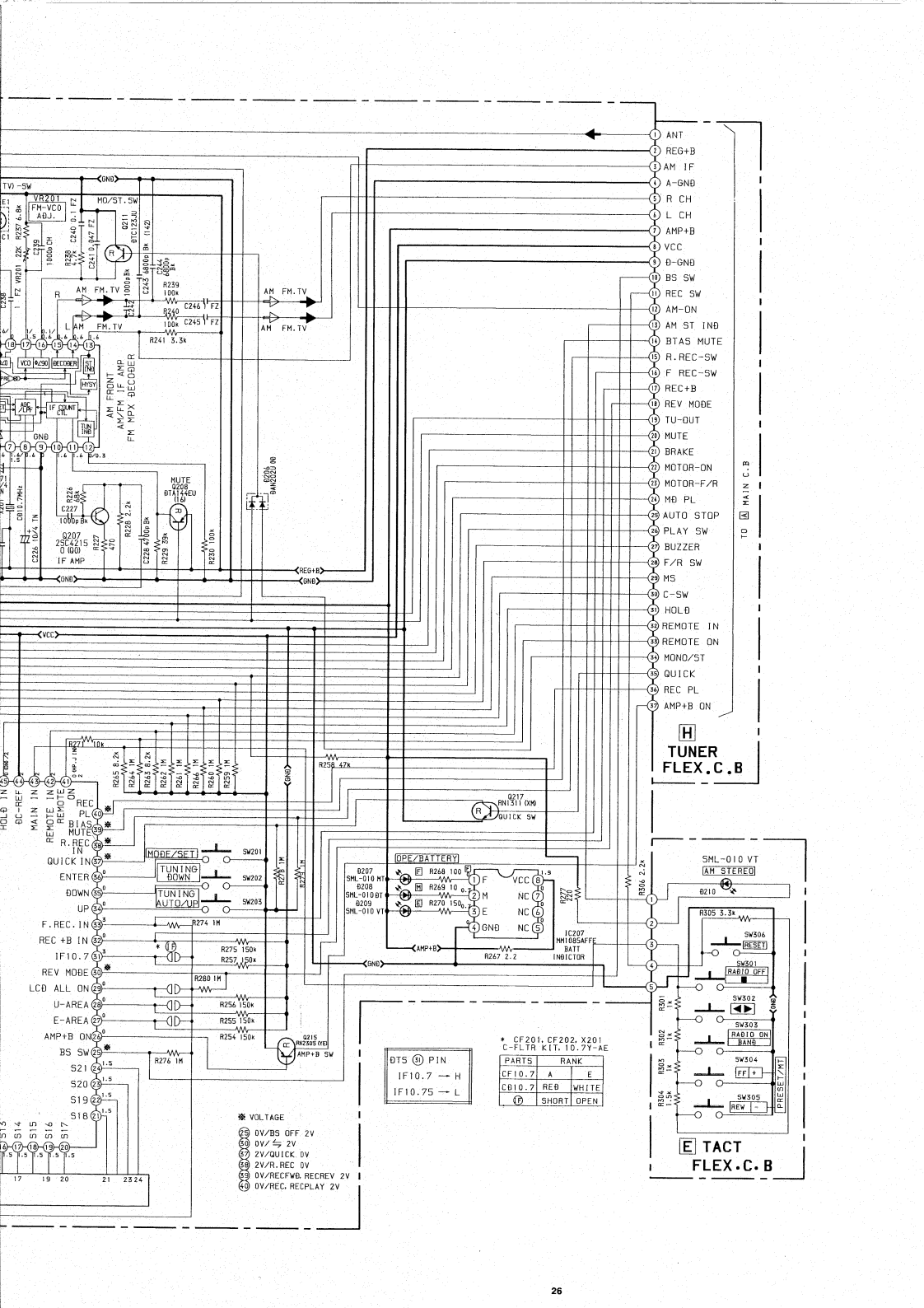
SCHEMATIC DIAGRAM – 3 (HS-JX859D AH) (MAIN SECTION)

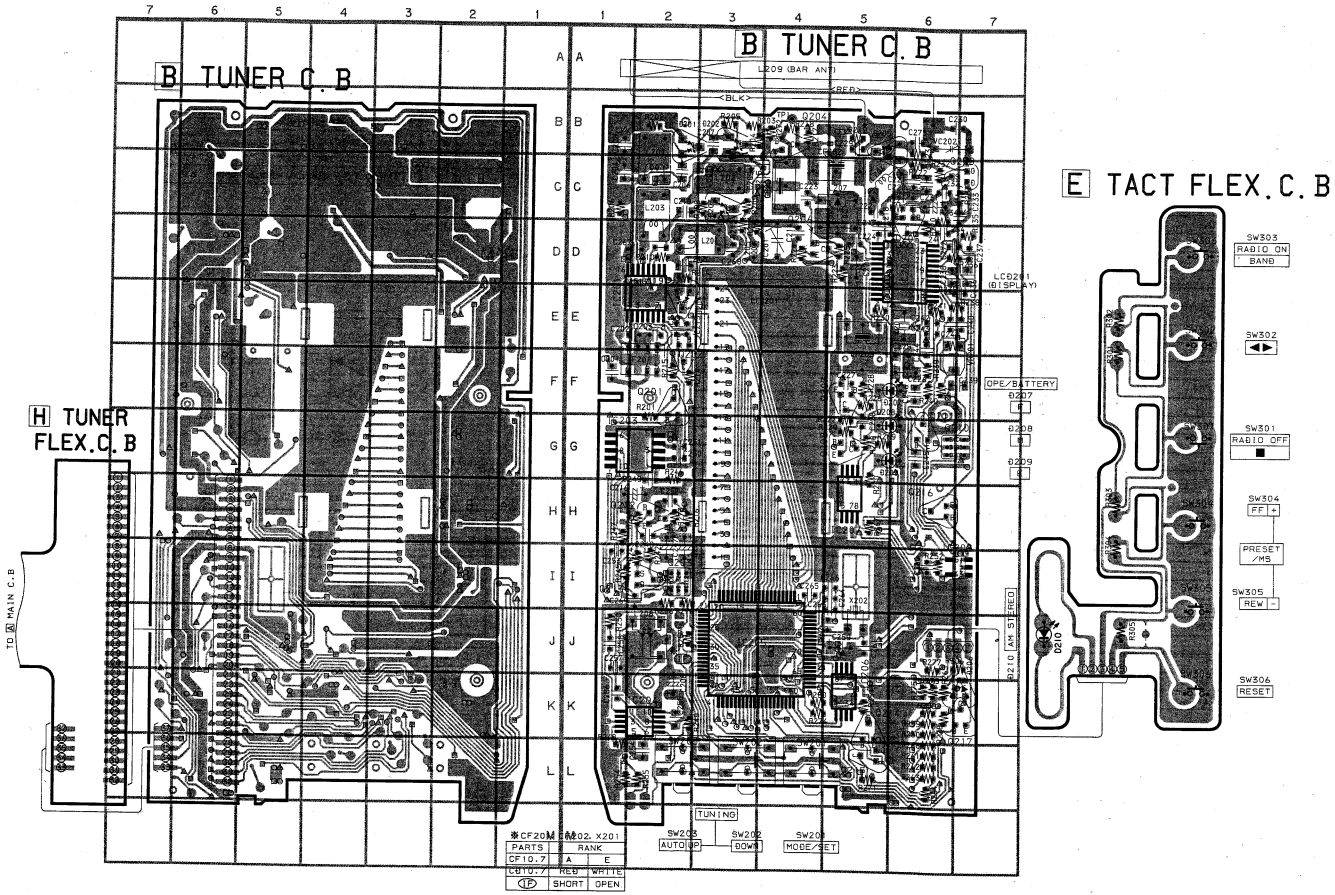



IC2 BA11064FS DOLBY NR
BIAS
IC3 TA7668F (S) MAIN AMP
MUTE
PW OFF
RIPPLE FILTER
MUTING
MUTING SW
MSP AMP
MSP SW
JAZZ
ROCK
POP
FLAT
SW3 (MSP)
RECHARGEABLE BATTERY PB-45
TAPE SPEED ADJ.
REVERSE MODE
TUNER FLEX.C.B
REGULATOR C.B
REC/ HOLD SW C.B
BRAKE SW
MOTOR BRAKE
REC PL DRIVER
MD PC DRIVER
LIMITER SW
POWER SW
STABILIZER
BATTERY R03X2

SCHEMATIC DIAGRAM – 4 ⟨HS-JX859D AH⟩ ⟨TUNER SECTION⟩




1 ANT
2 REG+B
3 AM IF
4 A-GND
5 R CH
6 L CH
7 AMP+B
8 VCC
9 D-GND
10 BS SW
11 REC SW
12 AM-ON
13 AM ST IND
14 BTAS MUTE
15 R.REC-SW
16 F REC-SW
17 REC+B
18 REV MODE
19 TU-OUT
20 MUTE
21 BRAKE
22 MOTOR-ON
23 MOTOR-F/R
24 MD PL
25 AUTO STOP
26 PLAY SW
27 BUZZER
28 F/R SW
29 MS
30 C-SW
31 HOLD
32 REMOTE IN
33 REMOTE ON
34 MONO/ST
35 QUICK
36 REC PL
37 AMP+B ON
TO A MAIN C.B
H TUNER FLEX.C.B
E TACT FLEX.C.B
AM FRONT
AM/FM IF AMP
FM MPX DECODER
IF AMP
MUTE Q208 BTA143EU
Q207 2SC4215
Q211 DTC123JU
Q215 RN2505 (TE)
Q217 RN1311 (TE)
VR201 FM-VCO ADJ.
MO/ST.SW
AM FM.TV
L AM FM.TV
R AM FM.TV
VCO
DECODER
HYSY
IF COUNT CTL
MUTING
SD
GND
VCC
REG+B
MODE/SET SW201
TUNING DOWN SW202
TUNING AUTO/UP SW203
OPE/BATTERY
D207 SML-010 MT
D208 SML-010 BT
D209 SML-010 VT
IC207 MM1085AFFE BATT INDICTOR
AMP+B SW
SML-010 VT
AM STEREO
D210
SW306 RESET
SW301 RADIO OFF
SW302
SW303 RADIO ON BAND
SW304 FF +
SW305 REW -
PRESET/MT
HOLD IN
DC-REF
MAIN IN
REMOTE IN
REMOTE ON
REC PL
BIAS MUTE
R.REC IN
QUICK IN
ENTER
DOWN
UP
F.REC.IN
REC +B IN
IF10.7
REV MODE
LCD ALL ON
U-AREA
E-AREA
AMP+B ON
BS SW
S21
S20
S19
S18
S13 S14 S15 S16 S17
DTS (51) PIN
IF10.7 → H
IF10.75 → L
* CF201, CF202, X201
C-FLTR KIT. 10.7Y-AE
PARTS | RANK
CF10.7 | A | E
CD10.7 | RED | WHITE
(P) | SHORT | OPEN
* VOLTAGE
(25) 0V/BS OFF 2V
(26) 0V/⇆ 2V
(27) 2V/QUICK 0V
(28) 2V/R.REC 0V
(29) 0V/RECFWD. RECREV 2V
(30) 0V/REC. RECPLAY 2V


B TUNER C.B
B TUNER C.B
H TUNER FLEX.C.B
E TACT FLEX.C.B
TO MAIN C.B
L209 (BAR ANT)
<BLK>
<RED>
LCD201 (DISPLAY)
OPE/BATTERY
D207
D208
D209
D210
SW303 RADIO ON BAND
SW302
SW301 RADIO OFF
SW304 FF
PRESET /MS
SW305 REW
SW306 RESET
TUNING
SW203 AUTO UP
SW202 DOWN
SW201 MODE/SET
*CF201, CF202, X201
PARTS | RANK
CF10.7 | A | E
CF10.7 | RED | WHITE
SHORT | OPEN

IC DESCRIPTION

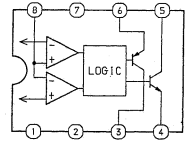
IC, TC9317F – 027

Pin No.	Pin Name	I/O	Description
1~3	COM1~COM3	O	LCD common
4~24	S1~S21	O	LCD driver out
25	BS SW	I	H: BS off, L: BS on
26	AMP+B ON	O	H: off, L: power on
27	E-AREA	I	H: E specifications, L: J specifications
28	U-AREA	I	H: U specificatons, L: J specifications
29	LCDALLON	I	H: all on, L: off
30	REV MODE	I	H: One reciprocating tape run, L: endless
31	IF10.7	I	H: IFf10.7, L: f10.75
32	REC+B IN	I	H: REC on, L: off
33	F. REC. IN	I	H: FWD REC inhibited, L: on
34	UP	I	H: Tuning to higher frequency, L: off
35	DOWN	I	H: Tuning to lower frequency, L: off
36	ENTER	I	H: ENTER operation in the tuner mode, L: off
37	QUICK IN	I	Quick reverse input
38	R. REC. IN	I	H: REV REC inhibited, L: on
39	BIASMUTE	O	Output synchronized with the MUTE signal
40	REC PL	O	Outputs pulses to switch on the REC operation.
41	REMOTE ON	I	H:Remote control key input disabled, L:Enabled
42	REMOTE IN	I	Remote control key input
43	MAIN IN	I	Main unit key input
44	DC-REF	I	Power supply to judge AD inputs
45	HOLD IN	I	H: hold on, L: off
46	C-SW IN	I	H: Cassette not inserted, L: Inserted
47	MS/BS IN	I	MS/BS input. H: Track provided, L:Inserted
48	F/RSW IN	I	H: Forward tape run, L: Reverse tape run
49	BUZZER	O	Beep output corresponding to the operation
50	PLAY IN	I	H: Mode other than tape play, L: Tape play
51	AU ST IN	I	Inputs the P-SENSOR output waveform.
52	MD PL	O	Outputs pulses to determine the mechansim state.
53	MOTOR F/R	O	H: Forward motor drive, L: Reverse
54	MOTOR ON	O	H: Motor drive off, L: on
55	BRAKE	O	H: Motor brake on, L: off
56	TV OUT	O	Outputs "H" for the TU, TV band.
57	FM-TV OUT	O	Outputs "H" for the TU, FM TV.
58	AM OUT	O	Outputs "H" for the TU, AM band.
59	C-SEL	O	EEPROM read/write control
60	SCK	O	EEPROM serial clock output
61	SDATA	I/O	EEPROM data input/output
62	MUTE	O	H: mute on, L:off
63	TEST	–	Not used.
64	IF IN	I	IF signal input
65	TU OUT	O	H: TU is operation, L: TU off
66	PLL OUT	O	PLL output
67	TU SW	I	H: TU on, L: TU off
68	PSC	O	Prescaler control output
69	GND	–	Ground
70	FM IN	I	FM programmable counter input

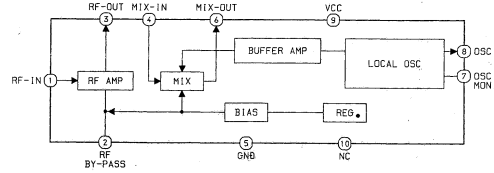
Pin No.	Pin Name	I/O	Description
71	AM IN	I	AM programmable counter input
72	VDD	–	Supply voltage
73	RESET	I	Reset input
74	X OUT	O	Crystal oscillator output
75	X IN	I	Crystal oscillator input
76	V XT	–	Power supply of crystal oscillator
77	V LCD	–	LCD drive refernce voltage
78, 79	C1, C2	–	LCD drive reference voltage
80	VEE	–	LCD drive 1.5 V stabilized voltage supply

IC BLOCK DIAGRAM

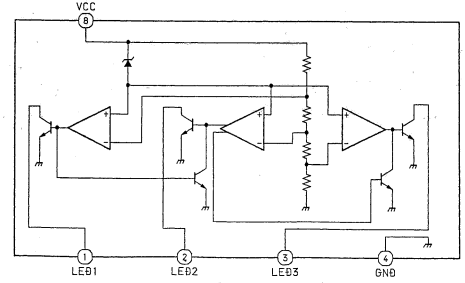
IC BA3714AF



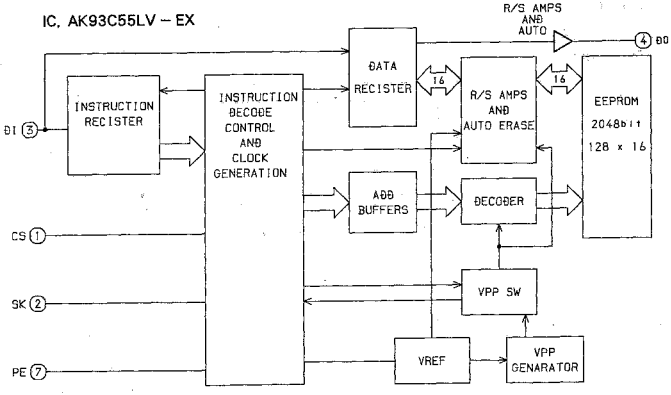
IC, TA8158F



IC, MM1085AFFE

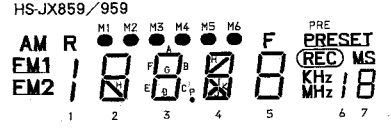


IC, AK93C55LV – EX



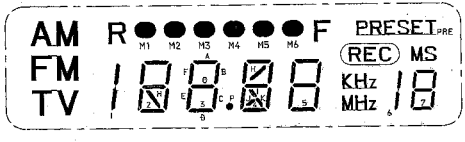
LCD DISPLAY

HS-JX859/959



NO	1	2	3	4	5	6	7	8	9	10	11	12
COM1	COM1	—	—	—	P	3D	2D	2H	2C	3E	3G	3C
COM2	—	COM2	—	FM2	4D	1	2E	2G	2B	3F	3A	3B
COM3	—	—	COM3	FM1	AM	R	2F	2A	M1	M2	M3	M4
NO	13	14	15	16	17	18	19	20	21	22	23	24
COM1	4E	M6	4I	4J	5E	5D	—	MHz	—	M5	7D	—
COM2	4F	4H	4G	4K	5F	5G	5C	KHz	6	7E	7G	7C
COM3	M5	4A	4B	4C	F	5A	5B	REC	PRE	7F	7A	7B

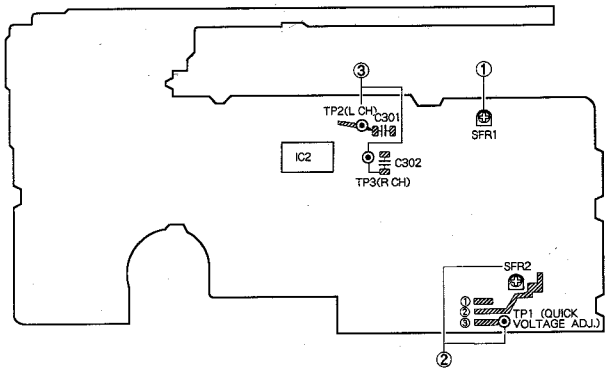
HS-JX859D



NO	1	2	3	4	5	6	7	8	9	10	11	12
COM1	COM1	—	—	TV	P	3D	2D	2H	2C	3E	3G	3C
COM2	—	COM2	—	—	4D	1	2E	2G	2B	3F	3A	3B
COM3	—	—	COM3	FM	AM	R	2F	2A	M1	M2	M3	M4
NO	13	14	15	16	17	18	19	20	21	22	23	24
COM1	4E	M6	4I	4J	5E	5D	—	MHz	—	M5	7D	—
COM2	4F	4H	4G	4K	5F	5G	5C	KHz	6	7E	7G	7C
COM3	M5	4A	4B	4C	F	5A	5B	REC	PRE	7F	7A	7B

HS-JX859/959

A MAIN C.B



< TAPE RECORDER SECTION >

1. Tape Speed Adjustment

Settings : • Test tape : TTA – 100
• Test point : PHONES JACK
• Adjustment location : SFR1

Method : Play back the test tape, adjust for 3015 Hz ± 10 Hz at FWD and ± 55 Hz at REV.

2. Quick Reverse Adjustment

Settings : • Test tape : TTA – 320
• Test point : TP1 QUICK VOLTAGE ADJ TP
• Adjustment location : SFR2
• DOLBY SW : OFF
• MSP : FLAT
• BLANK SKIP : OFF
• QUICK REVERSE : OFF
• VOLUME MIN

Method : Play the alignment tape (FWD) and adjust SFR2 so the voltage at TP1 is 1.6 V ± 0.02 V. After adjustment, set the QUICK REVERSE SW to ON and check that the quick reverse operation is correct.

Cautions : • Also adjust the voltage after the tape speed adjustment is completed.
• The magnetic surface of the alignment tape should be free from scratches.

3. DOLBY Level Check

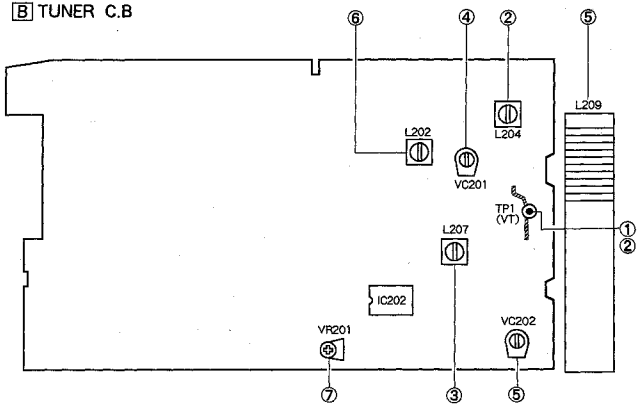
Settings : • Test tape : TTA – 200
• Test point : TP2 (L ch), TP3 (R ch)
• DOLBY SW : OFF
• MSP : FLAT
• VOLUME : MIN "0"

Method : Connect an electrolytic capacitor (10 μF/16 V) to measured equipment and TP2 (3), check the voltage for 100 mV ± 1.0 dB.

4. Azimuth Adjustment

This model is no azimuth adjustment.

B TUNER C.B



< RADIO SECTION >

1. AM VT Check
   Settings : • Test point : TP1 (VT)
   Method : 1) Set to AM 531 kHz and test point becomes 0.65 V~1.3 V.
   2) Set to AM 1602 kHz and the test point becomes 7.2 V~8.2 V.

2. FM VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L204
   Method : Set to FM 87.5 MHz and adjust L204 so that the test point becomes 1.0 V ± 0.05 V. And also FM 108 MHz becomes 7.8 V ± 0.6 V.

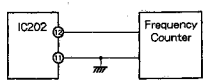
3. AM IF Adjustment
   L207 ····· 450 kHz

4. FM IF Adjustment
   VC201 ····· 10.7 MHz

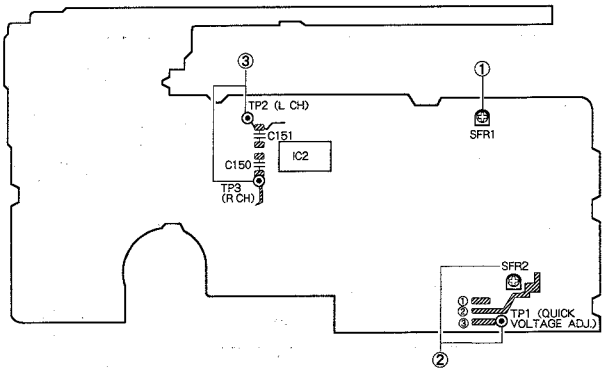
5. AM Tracking Adjustment
   L209 ····· 630 kHz
   VC202 ····· 1440 kHz

6. FM Tracking Adjustment
   L202 ····· 87.5 MHz

7. FM VCO Adjustment
   Settings : • Adjustment location : VR201
   Method : Connect the below figure to counter and adjust VR201 so that the frequency becomes 19 kHz ± 100 Hz.



A MAIN C.B.



< TAPE RECORDER SECTION >

1. Tape Speed Adjustment

Settings : • Test tape : TTA – 100
• Test point : PHONES JACK
• Adjustment location : SFR1

Method : Play back the test tape, adjust for 3015 Hz ± 10 Hz at FWD and ± 55 Hz at REV.

2. Quick Reverse Adjustment

Settings : • Test tape : TTA – 320
• Test point : TP1 QUICK VOLTAGE ADJ TP
• Adjustment location : SFR2
• DOLBY SW : OFF
• MSP : FLAT
• BLANK SKIP : OFF
• QUICK REVERSE : OFF
• VOLUME MIN

Method : Play the alignment tape (FWD) and adjust SFR2 so the voltage at TP1 is 1.6 V ± 0.02 V. After adjustment, set the QUICK REVERSE SW to ON and check that the quick reverse operation is correct.

Cautions : • Also adjust the voltage after the tape speed adjustment is completed.
• The magnetic surface of the alignment tape should be free from scratches.

3. DOLBY Level Check

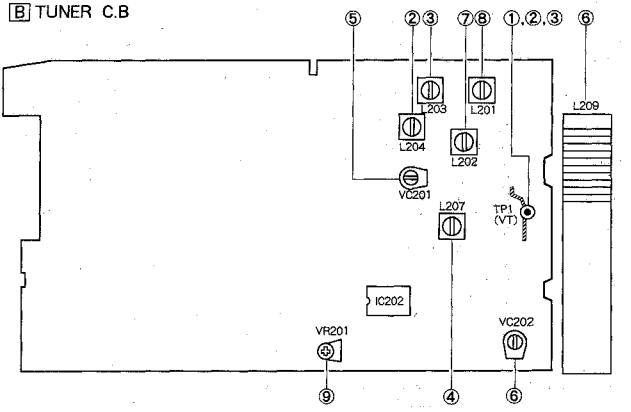
Settings : • Test tape : TTA – 200
• Test point : TP2 (L ch), TP3 (R ch)
• DOLBY SW : OFF
• MSP : FLAT
• VOLUME : MIN "0"

Method : Connect an electrolytic capacitor (10 μF/16 V) to measured equipment and TP2 (3), check the voltage for 100 mV ± 1.0 dB.

4. Azimuth Adjustment

This model is no azimuth adjustment.

B TUNER C.B



<RADIO SECTION>

1. AM VT Check
   Settings : • Test point : TP1 (VT)
   Method : 1) Set to AM 531 kHz and test point becomes 0.65 V~1.3 V.
   2) Set to AM 1629 kHz and the test point becomes 7.2 V~8.2 V.

2. FM VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L204
   Method : Set to FM 76.0 MHz and adjust L204 so that the test point becomes 1.0 V ± 0.05 V. And also FM 108 MHz becomes 8.5 V ± 0.6 V.

3. TV VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L203
   Method : Set to TV 12 CH and adjust L203 so that the test point becomes 9.2 V ± 0.4 V. And also TV 4 CH becomes 1.3 V ± 0.3 V.

4. AM IF Adjustment
   L207 ····· 450 kHz

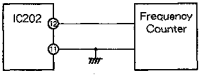
5. FM IF Adjustment
   VC201 ····· 10.7 MHz

6. AM Tracking Adjustment
   L209 ····· 630 kHz
   VC202 ····· 1440 kHz

7. FM Tracking Adjustment
   L202 ····· 76.0 MHz

8. TV Tracking Adjustment
   L201 ····· 4 CH

9. FM VCO Adjustment
   Settings : • Adjustment location : VR201
   Method : Connect the below figure to counter and adjust VR201 so that the frequency becomes 19 kHz ± 100 Hz.



PRACTICAL SERVICE FIGURE
HS-JX859/959

< RADIO SECTION >

Sensitivity :	
(IHF, THD 3%)	FM Less than 19 dB (98.5 MHz)
(S/N 10dB)	AM Less than 57 dB (999 kHz)
Intermediate frequency :	FM 10.7 MHz
	AM 450 kHz
FM stereo separation :	FM More than 15 dB (1 kHz)

< TAPE RECORDER SECTION >

Wow & flutter :	Less than 0.45% (R. M. S)
Distortion :	Less than 3% (PB)
	Less than 10% (REC)
S/N ratio :	More than 45 dB (PB)
	More than 35 dB (REC)
Noise level :	Less than 3 mV
	(VOL MAX DC PB)
Erasing ratio :	More than 55 dB
REC bias frequency :	54 kHz
Pinch roller pressure :	145 ± 15 g
Take-up torque :	22~32 g-cm (FWD, REV)
F.F torque :	70~140 g-cm
Rew torque :	60~100 g-cm
Back tension :	2~4.5 g-cm
Frequency response (PB) :	63 Hz~8 kHz ± 3 dB (NORMAL)
	63 Hz~10 kHz ± 3 dB
	(CrO_2, METAL)

PRACTICAL SERVICE FIGURE
HS-JX859D

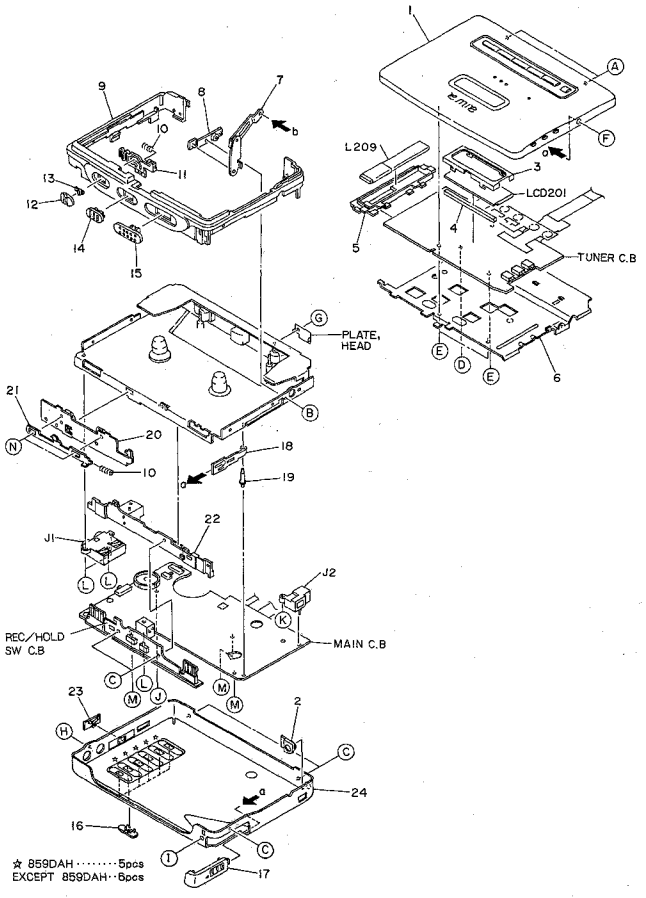
< RADIO SECTION >

Sensitivity :	
(IHF, THD 3%)	FM Less than 19 dB (90 MHz)
(S/N 10dB)	AM Less than 57 dB (999 kHz)
	TV Less than 5 dB (4, 8, 12 CH)
Intermediate frequency :	FM 10.7 MHz
	AM 450 kHz
FM stereo separation :	FM More than 15 dB (90 MHz)
AM stereo separation :	AM 18 ± 3 dB (999 kHz)

< TAPE RECORDER SECTION >

Wow & flutter :	Less than 0.45% (R. M. S)
Distortion :	Less than 3% (PB)
	Less than 10% (REC)
S/N ratio :	More than 45 dB (PB)
	More than 35 dB (REC)
Noise level :	Less than 3 mV
	(VOL MAX DC PB)
Erasing ratio :	More than 50 dB
REC bias frequency :	54 kHz
Pinch roller pressure :	145 ± 15 g
Take-up torque :	22~32 g-cm (FWD, REV)
F.F torque :	70~140 g-cm
Rew torque :	60~100 g-cm
Back tension :	2~4.5 g-cm
Frequency response (PB) :	63 Hz~8 kHz ± 3 dB (NORMAL)
	63 Hz~10 kHz ± 3 dB
	(CrO_2, METAL)

MECHANICAL EXPLODED VIEW 1/1

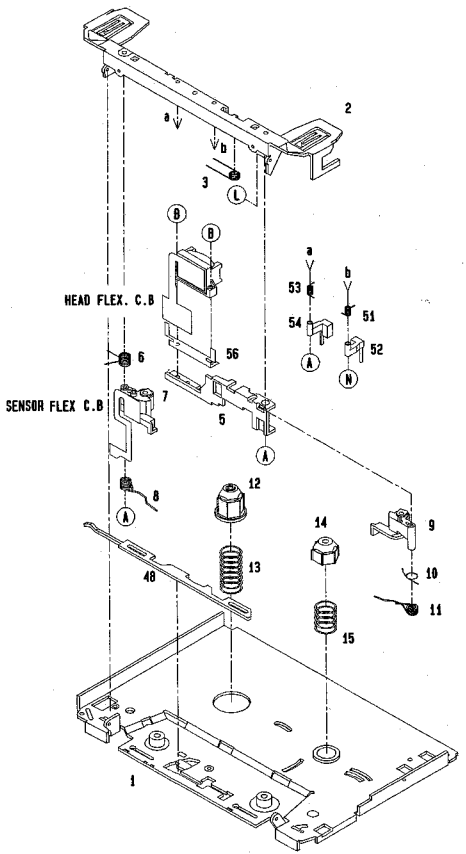


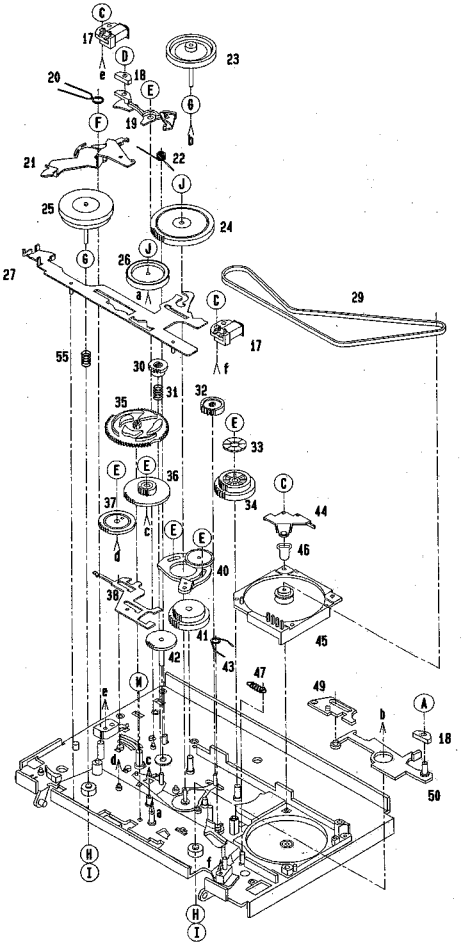
MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	09-028-228-010		LID CASS ASSY<859DAH>
1	09-028-236-010		LID CASS ASSY<859AH,859YHS>
1	09-028-237-010		LID CASS ASSY<959AH>
2	84-HK4-212-010		SPACER,DC
3	85-HR4-211-010		BRKT,LCD
4	85-HR4-214-010		RUBBER,LCD
5	85-HR4-202-010		HLDR,ANTENNA
6	85-HJ2-201-010		HLDR,CASS
7	84-HJ2-206-010		ARM ASSY,HINGE
8	84-HK3-205-310		NUT,B-BOX
9	85-HJ2-005-010		FRAME,CENTER<EXCEPT 959AH>
9	85-HJ2-030-010		FRAME,CENTER<959AH>
10	82-HK3-206-110		C-SP,LOCK
11	85-HJ2-211-110		PLATE,REC
12	85-HJ2-013-010		KNOB,SL REC<EXCEPT 959AH>
12	85-HJ2-033-010		KNOB,SL REC G<959AH>
13	85-HJ2-014-010		KNOB,LEVER REC
14	85-HR4-008-010		KNOB,SL HLD<EXCEPT 959AH>
14	85-HJ2-034-010		KNOB,SL HOLD G<959AH>
15	85-HR4-012-010		KNOB,SL OPEN<EXCEPT 959AH>
15	85-HR4-012-010		KNOB,SL OPEN G<959AH>
16	84-HJ2-014-010		KNOB,SL REAR
17	85-HJ2-006-010		LID,BAT
18	85-HK4-210-010		HINGE,BAT
19	85-HJ2-210-010		SHAFT,HINGE
20	85-HJ2-208-010		BASE,LOCK ASSY
21	85-HJ2-205-010		PLATE,LOCK
22	85-HJ2-207-010		HLDR,BAT
23	84-HK3-013-010		KNOB,SL B(BLK)
24	85-HJ2-023-010		CABI,REAR DAHLB<859DAH>
24	85-HJ2-018-010		CABI,REAR H<859AH,859YHS>
24	85-HJ2-029-010		CABI,REAR G<959AH>
A	87-078-137-010		S-SCREW,+1.4-0.8-1 NL
B	87-067-736-010		S-SCREWI.4-2 BLK N
C	87-078-139-010		SCRW-SERR,M1.4-2.5B
D	87-078-189-010		S-SCRW,+1.7-2.5HL S
E	87-078-190-010		S-SCRW,+1.7-3HL B
F	87-067-865-010		S-SCRW,HJ(BLK)
G	87-078-216-010		SCRW-SR,1.4-1.4B LS
H	87-078-184-010		SCRW-SR,1.4-1.8B L
I	85-HR4-216-010		SCRW-SR,1.4-4 B L
J	87-067-746-010		SCREW-SERR M1.4-2
K	87-262-509-310		V+1.4-4 BLK
L	87-078-166-010		V+1.4-4.2(3)BLK
M	87-067-384-010		VTI.4-3.5 HL
N	87-067-351-010		SCREW CAB M1.4 BLK

TAPE MECHANISM EXPLODED VIEW 1/1



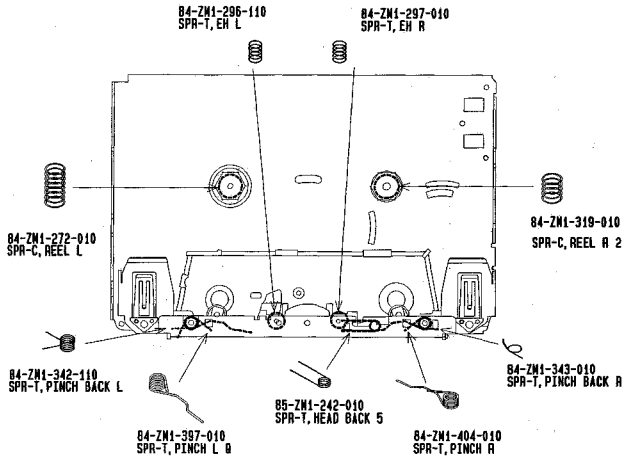


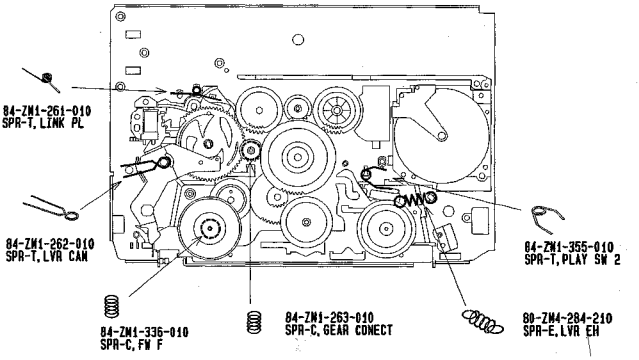
TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	84-ZM1-301-110		OUT-SEAT ASSY
2	84-ZM1-399-110		HLDER CASSET ASSY J Q
3	85-ZM1-242-010		SPR-T,HEAD BACK 5
5	84-ZM1-270-110		ARM HEAD SN
6	84-ZM1-342-110		SPR-T PINCH BACK L
7	84-ZM1-398-210		ARM ASSY PINCH L Q
8	84-ZM1-397-010		SPR-T,PINCH L Q
9	84-ZM1-408-110		ARM ASSY,PINCH R 50
10	84-ZM1-343-010		SPR-T PINCH BACK R
11	84-ZM1-404-010		SPR-T,PINCH R
12	84-ZM1-227-110		GEAR REEL L
13	84-ZM1-272-010		SPR-C,REEL L
14	84-ZM1-220-110		REEL CAP,R
15	84-ZM1-319-010		SPR-C,REEL R 2
17	84-ZM1-605-010		SOL,MD REC
18	84-ZM1-602-010		CHIP,SOL
19	84-ZM1-309-110		LINK PL R
20	84-ZM1-262-010		SPR-T,LVR CAM
21	84-ZM1-204-010		LVR ASSY,CAM
22	84-ZM1-261-010		SPR-T,LINK PL
23	84-ZM1-316-110		FW ASSY L SM
24	84-ZM1-231-510		SLIP ASSY
25	84-ZM1-348-010		FW ASSY,R OH
26	84-ZM1-280-010		PULLY PM
27	84-ZM1-306-210		LVR ASSY,HEAD R
29	84-ZM1-315-110		BELT 2
30	84-ZM1-226-010		GEAR CAM C
31	84-ZM1-263-010		SPR-C,GEAR CONECT
32	84-ZM1-225-110		GEAR FR
33	84-ZM1-402-010		SH,AUTO-6
34	84-ZM1-240-010		GEAR IDLE B
35	84-ZM1-221-310		GEAR CAM
36	84-ZM1-223-410		GEAR LINK B
37	84-ZM1-222-110		GEAR LINK A
38	84-ZM1-217-210		L,FR LOCK
40	84-ZM1-210-110		LVR ASSY,T-UP
41	84-ZM1-224-110		GEAR IDLE A
42	84-ZM1-228-110		GEAR REEL R
43	84-ZM1-355-010		SPR-T,PLAY SW 2
44	84-ZM1-379-110		SPR-P,MOT
45	84-ZM1-392-010		MOT,ASSY 4P
46	84-ZM1-383-010		THRUST PLATE
47	80-ZM4-284-210		SPR-E,LVR EH
48	84-ZM1-281-110		LVR ASSY,EH
49	84-ZM1-285-210		LINK REC
50	84-ZM1-287-010		LVR ASSY,REC PL
51	84-ZM1-297-010		SPR-T,EH R
52	84-ZM1-295-110		EH R
53	84-ZM1-296-110		SPR-T,EH L
54	84-ZM1-294-210		EH L
55	84-ZM1-336-010		SPR-C,FW F
56	84-ZM1-293-210		SH EH CLV
A	87-067-569-019		FW,0.83-2.5-0.25SLT
B	87-078-088-110		S-SCREW V+1.4-3.5
C	87-067-384-019		VT+1.4-3.5(HL)
D	87-067-367-019		FW,0.95-2.6-0.25C
E	87 067-860-019		FW,3-0.95-0.4
F	87-078-018-019		FW,1.55-3.5-0.25 C60
G	87-078-071-019		SW,1.2-3-0.25
H	87-078-101-010		RW,1.21-2.4-0.25
I	87-078-065-019		SH,0.9-2.25-0.25
J	87-067-693-019		FW,3-0.8-0.25 SLT
L	87-810-015-019		W,1-3-0.35
M	87-078-125-010		S-SCREW,V+1.4-0.9
N	87-078-172-010		FW,0.83-2.5-0.13SLT

SPRING APPLICATION POSITION





REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SNAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART